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# **ALEXA INTERNET PRESS CLIPS**

**May 1998 to October 1998**



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MAY



The Daily Times  
 Erie, PA  
 May 17, 1998

# Web sites can be here today, but gone tomorrow

By DAVID PLOTNIKOFF  
 Knight Ridder Newspapers

It was a bittersweet errand for a Friday night: For the first time in many years, I was going back to the place I'd worked for six very contented years prior to signing on with the San Jose Mercury News. My old crew was reconvening, a special one-night-only deal to mark a departure. The boss who'd been the key to our contentment was retiring.

It was a casual affair — pizza and potluck desserts, seasoned with a lot of funny little stories. And, of course — this being Silicon Valley in 1988 — there was a digital tribute, a Web page filled with photos and collected memories.

Aesthetically speaking, the page on the free Geocities service was a modest effort. But for those of us who'd been there, it was priceless. Later that night, I sent "you-gotta-check-this-out!" e-mail to a couple of old friends who didn't make the party. And as I did so, I found myself calculating just how long it might be before the page simply vanished into the ether. I knew the chances were good that by the time my friends got around to punching it up, it would be just another 404 error, another missing patch in the digital quilt.

The Web is a dynamic medium, certainly more a river than a reservoir. Vast resources that are there one day are simply washed away the next. Most of us seem to accept this instability as a natural condition of cyberspace. But it's still something of a shock to realize exactly how volatile the networked world is. Alexa Internet, the San Francisco-based company that uses software robots to mine the great reaches of the Web for the non-profit Internet Archive, has mapped and stored about 10 terabytes of data. The firm figures that the average lifespan of a Web page is just 77 days. While Alexa has yet to calculate exactly how often resources are removed from the network, we can safely say that's a lot of 404 error messages.

Should the Web grow into an archival medium as well as a news medium? Far be it from me to say. That's the prerogative of the authors and Web masters. What troubles me is the inherent uncertainty involved in using the Web in its current form. With other media, a user has a reasonable expectation how long a resource will be available. We know the information contained in newspapers and mag-

azines and compact discs generally don't disappear from the information marketplace overnight. With the Web you launch your browser and take your chances.

This uncertainty has any number of bad consequences when it comes to integrating the Web into the rest of the infosphere. Academics are wary of referencing online source materials for fear that those sites won't be there by the time their theses come up for review. I suspect book publishers shy away from bundling CD-ROMs of Web links with their titles for the same reason. And on the consumer end, we all know people who've been conditioned to print out hard copies of every Web page that catches their fancy.

The question we might be wise to ask ourselves is this: Do we really want to build a culture that purges its own past every 77 days?

## ■ THE GREAT OUT-DOORS:

A half-dozen federal agencies charged with stewardship of America's wide open spaces have banded together to offer a comprehensive database of nearly 2,000 recreation sites — parks, forests and other public resources — searchable by state and activity. The service, at <http://www.recreation.gov>, provides thumbnail summaries of each recreation site, contact numbers, maps, weather forecasts and links to many pages maintained by individual jurisdictions.

## ■ DEPT. OF GOOD WORKS:

If you've got the time, chances are Impact Online has the right volunteer opportunity for you. The Palo Alto, Calif.-based non-profit organization functions as a Web clearinghouse of sorts, matching people with both one-shot and ongoing volunteer tasks. The agency's new VolunteerMatch service, at

<http://www.volunteermatch.org>, allows potential volunteers to search a vast national database of openings and filter the results by their own requirements. Punch in your ZIP code, then specify the distance you can travel, the type of public service you'd like to explore and the time you can spare. The service returns a custom list of contacts. In addition to the national database, there are also listings by city.

## ■ DO-IT-YOURSELF

**'DOONESBURY':** Cartoonist Garry Trudeau became the latest big-name author to cast his creative fate to the digital wind. "The People's Doonesbury@Amazon.com," which debuted Monday last week

chance for Trudeau's fans to try their hand at creating plot and dialogue for B.D., Mike, Zonker and the rest of the beloved cast. Here's the deal: Ten panels drawn exclusively for the event are posted on the site. Trudeau filled in dialogue for the first panel. Visitors to the online bookseller are submitting their suggestions for the subsequent panels. Each day, the winning entry is added to the site until the 10 panels are complete. Trudeau will then cap it off with a final frame, to be posted May 18. On May 19, the complete project will be printed as a full-page feature in USA Today. See you in the funny papers.

**■ NUMBERS GAME:** For those of you keeping score at home, the Net-research firm Relevant Knowledge says it's calculated the total population of Web users in the United States to be 57 million and change, up 1.6 million since January. The company used random-digit-dialed interviews with 10,000 people to arrive at that figure, with an error rate of plus or minus 1.5 percent. (The usual caveat applies: Counting heads on the Net is still as much an art as a science. Other companies using different methods and definitions estimate the total number of U.S. users to be anywhere from 38 million to 52 million.)

The new Relevant Knowledge stats showed no change in the percentage of Web users with college degrees (51 percent) and virtually no change in the gender split (58 percent male to 44 percent female). The one significant blip since the beginning of the year: The population segment aged 18-34 is now 39 percent of the Web audience, up five percentage points since January.

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**Robert Seidman's  
ONLINE  
INSIDER**

# May 31, 1998

## Seidman's Online Insider - May 31, 1998

Vol. 5, Issue 18

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### Drinking the Kool-Aid



A few weeks ago, IBM relaunched its Web site with a new design. I didn't like it. I didn't like the way it looked and I didn't like the fact that it seemed to blow up Internet Explorer 4.0. To me, it looked hideous, but I would agree that sort of thing is a matter of taste.

So I wasn't shocked when my fellow participants in the Insider Talk discussions were not as disgusted with the site as I was. But it did bother me that nobody, including IBM, seemed to get the fact that IBM failed to do a good job of serving its customers -- which is, as far as I know, IBM's PRIMARY reason for having a Web site. The site is there mainly to give customers and potential customers information about IBM's products and services, period. So what's going to make IBM's customers and potential customers the happiest? Giving them the information as quickly and as easily as possible. Even though I personally didn't like the look of the site, the reason I think it's a bad site is not because of how it looks, but because of how it fails to achieve its primary mission: to provide IBM's customers and potential customers with information about IBM's products and services as quickly and as easily as possible.

Over a dual-channel ISDN connection, the home page alone took almost 2 seconds to load and came with more than 15 graphic images. OK, some that time may be MY connection, but it doesn't take much to know that it's going to be slower via a 28.8-kilobit-per-second connection and much slower over a 14.4 connection. Worse, there were no text links, so I HAD to wait for the graphics to load to get where I wanted to go.

I wanted info on ThinkPads (one of the best computer products of all

time, as far as I'm concerned -- maybe IBM ought to let the ThinkPad folks design the Web site!). Well, there was no info about ThinkPads on the home page, so I clicked on the "Products" button. More than 20 graphics were on the products page, but it took me only 12 seconds more to get the info (remember, though, this was over a dual-channel ISDN connection). Again, no text links -- only graphics. There was no direct link to ThinkPads, so I choose the PCs and Notebooks icon. The next page took only a few seconds to load, but there was only one purpose for the page: It wanted to know which country I'm from. Thinking this was a real waste of space and time, but left with no other choice, I made a selection (the United States). Nothing happened, so after a while, I hit stop. Then I clicked the "Go" button again and got an IE 4 dialog box telling me that there was a script error on the page and that "options" was not an object. I decided (wisely, I think) not to debug the error and just clicked "No." I then had to select the United States again; this time it worked. I was taken to a products page (more than 25 graphic images that took 16 seconds to load over my dual-channel ISDN connection).

The bad news, after all that, was I still wasn't done. I had to click on the Notebooks and PDAs option. Here I got my first option to actually select something from the ThinkPad line. Yay! It took a few more clicks and waiting for slow pages to load before I finally got to the spec sheet for the Model 770 I've been eyeballing.

While I object to the look of the site and while I vehemently object to the heavy use of graphics, I could live with all those things. What really bothers me is that it took me five clicks (and pages) to get to the first page of information about ThinkPads! Easily, half of the clicks were entirely unnecessary.

Now, I do understand that IBM has an image to maintain and can't just put up a site that doesn't represent its image well, but it seems to me that IBM came nowhere near balancing its own objectives against the objectives of the people who have to USE the site. A lot of people have told me that the IBM site looks really cool. I might not agree with that, but that doesn't matter. "Cool" should not factor into the equation. All you have to do is look at Yahoo! and then look at Yahoo!'s position in the marketplace to figure out that "cool" isn't an integral part of the equation.

Yahoo! has succeeded because it's both quick AND easy. In fact, initially at least, "easy" carried Yahoo! a long way ahead of its competition. Searching is too hard for a lot of people, and on Yahoo! you don't have to search. You can drill down through a topical menu to get the info you want. It's extremely functional. It isn't the prettiest or coolest-looking site, for sure, but it serves its customers extremely well!

What concerns me here is that those of us in the industry seem willing to put up with a lot of crap. Several people wrote me to say, "Hey, the IBM site works, why rag on it?" Yes, it does work, but it isn't anywhere near as easy as it could be. I'm concerned that people are designing sites with things other than their users in mind. The IBM site seems designed to please, well, designers -- and maybe a few execs within IBM. And people are telling me, hey, this is OK -- because it works! That's not good enough. That doesn't take advantage of the opportunity that exists. Yes, the true computer enthusiast will put up







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And that sort of does appear to be the case, at least for the time being. Netscape maintains that it has more than 60 percent of the browser market. And, clearly, Netscape's giving its browser away -- if the quarter ended in April is an indication -- did not seem to have much impact.

The revenue generated from Netcenter (Netscape's Web site) grew to \$31 million, up 55 percent compared with last year and 48 percent compared with the quarter ended Dec. 31 -- and that's without any of the Excite money.

#### \*New Stuff From Netscape\*

(based on a conversation with Netscape VP, Mike Homer, which, unfortunately happened after the newsletter had already been edited!)

After going through Netscape's 35 page PowerPoint presentation (hey, EVERYONE uses Microsoft applications, I guess!), with Homer, I have to say that it looks like Netscape is FINALLY getting its online act together.

I saw prototypes for the new "portal" which will be dubbed Netcenter 2.0 (at least internally). The new Netcenter will be very much Yahoo!-like and Excite-like, except it probably will have better content for some of its channels than Yahoo! or Excite. For example, Yahoo! and Excite rely almost exclusively on wire services for their sports coverage, but Netscape will likely partner with the likes of an ESPN or CBS Sportsline to produce content for NetCenter's sports channel. This may, at least temporarily, give Netscape a leg up on its competition. It will at least provide some differentiation. While the channels are under development, Netscape will temporarily use Excite's channels.

See [this piece](#) for more details on the channels Netscape is producing, a channels it is relying on Excite for.

Netscape's personalization (code named "Manhattan", it will be called "My Netscape") is scheduled to be in beta when Netcenter 2.0 debuts sometime between the middle and end of June. Netscape's approach is different than the competitions with personalization in that it is trying to make a "web desktop" (within a browser window). In other words, the sections of the page are all their own "windows" which may be tiled, maximized, minimized, moved around on the page, etc. The one possible drawback here is that the use of Javascript to make these sections their own windows likely increases the size of the pages. I asked Homer about this and while he couldn't tell me how big the default personalized page would be the specification for the product called for the file size to be no bigger than "My Yahoo!" or "My Excite". Based on what I saw, I'm betting it is bigger by a noticeable amount.

Nice features that will be added into future versions of the Navigator browser (versions 4.06, a 4.5 version and, ultimately, 5.0) include an icon on the browser toolbar that will take you directly to your personalized page. Also, coming in those

versions will be something called "Smart Browsing". This allows a user to type, for example "Ford" into the URL address bar and get to the Ford web site. It is like taking the functionality of Centraal's "Real Name" system and putting it directly in the browser. While initially the database of sites will only contain about 10,000 sites, it will grow. If the entry isn't in that database, Netscape will then look through the Internic's domain name registration database. If it still can't find anything, it will do a regular "search" via Excite and display the results. In spite of the success of the search engines, the one thing Homer says customers complain loudest about is that it is too hard to find what they are looking for. Smart Browsing is definitely a step in the direction of making that easier.

Also included will be a feature called "What's Related". So, for example, once I'm on the Ford Web site, there will be an icon called "What's Related", if I click it, a menu will drop down listing related sites. The back-end for the "What's Related" service will be provided by Alexa Internet, who makes the free Web navigation add-on, Alexa.

Unfortunately, in order to take advantage of this, you'll have to download Navigator 4.06, which should be available when Netcenter 2.0 launches. Interestingly, Homer described the breakout of existing Navigator usage as follows:

35% on 4.x  
35% on 3.x  
20% on 2.x  
10% on 1.x

What this demonstrates to me is that it takes a while for folks to gravitate to the new browsers. I asked Homer when he thought 35% would upgrade to the forthcoming version and he predicted about 6 months. This seems very aggressive to me, but Homer points out that they're getting more distribution all the time and as a result of DOJ initiatives and that the Navigator is now free, they'll get more OEM deals (Gateway announced it would use Navigator for Gateway's own online service it will begin bundling with its machines). I asked Homer if he thought most of that was because the browser was free, and not related to the DOJ case against Microsoft.

"While I think it is primarily because the browser is now free, I still think it is a combination of that and the DOJ initiatives. You'd be amazed at how afraid of Microsoft some of these (computer manufacturers) companies are. They're afraid Microsoft is going to screw them somehow," says Homer.

Homer figures that between OEM, ISP and deals with companies, more than 100 million copies of Netscape will be distributed over the next year.

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million. Already MCI-WorldCom's would-be competitors are claiming the sale isn't enough to satisfy anti-competitive concerns. Stay tuned...

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## Insider Talk Update

Rich Miller, president and CEO of Telematica, started a great thread on e-commerce development. Essentially, Rich laid the groundwork for a framework to use in looking at e-commerce. Miller's concept, with a little help from FontBank president Jerry Saperstein, covers the entire spectrum of e-commerce. I think it is a great place to start. To be honest, participation hasn't been what I'd like to see in this thread, so if you're already an Insider Talk participant and feel qualified to speak on the subject of e-commerce, please dive in. If you're not a participant and think you should be, send e-mail to [insiders@onlineinsider.com](mailto:insiders@onlineinsider.com), and I'll get you set up with access. But whoever you are, if you're interested in e-commerce in any way, you'll want to check out the action [here](#).

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## Stock Watch for the Week Ended May 29, 1998

Courtesy of InfoBeat's CLOSING BELL < <http://www.infobeat.com> >.

SECURITY	52 Wk CLOSE	52 Wk HIGH	P/E	Week LOW	Ratio	C
AT&T Corp.....	60 7/8	68 1/2	34	21	+3	
Amazon Com Inc.....	88 1/8	100	16 1/2	260	+2	
America Online Inc.....	83 5/16	92 1/4	26 5/8	260	-	
Apple Computer Inc.....	26 5/8	31 5/8	12 3/4	260	-4	
At Home Corporation Ser A	34 3/4	47	16 5/8	260	-7	
C/Net.....	36 1/4	46 1/2	19 5/16	260	-4	
CMG Info Svcs. Inc.....	44 3/8	53 3/4	6 3/16	260	-9	
Cendant Corporation.....	21 3/4	41 11/16	17	363	-	
Cmp Media Inc Cl A.....	21	29 3/8	13 3/4	23	-6	
Concentric Network Corp..	22 1/8	30	7 7/8	23	-1	
Cybercash Inc.....	15 1/16	27 3/4	10 1/8	23	-10	
Earthlink Network Inc....	54 1/2	77	10	23	+0	
Excite Inc.....	54 3/8	93 5/16	10 1/8	23	-8	
FTP Software Inc.....	2 5/8	5 15/16	1 1/2	23	-12	
GTE Corporation.....	58 5/16	64 3/8	40 1/2	25	-1	
H & R Block Inc.....	44	49 1/16	30 5/8	14	-1	
Hewlett Packard Company..	62 5/16	82 3/8	50 1/8	22	-5	
IBM.....	117 1/2	129 5/16	81 3/4	20	-3	
ICG Communications Inc...	30 1/4	44 1/4	15 1/4	28	+0	
Infoseek Corporation.....	23 1/16	45	4 3/8	28	-11	
Lycos Inc.....	53 1/64	79 1/8	11 3/16	28	-6	
MCI Communications Corpor	53 15/32	54 3/16	27 5/16	28	+1	
Mecklermedia Corp.....	20 3/4	29 7/8	17 3/4	28	-6	

Microsoft Corporation....	84	13/16	99	1/8	58	3/4	54	-0
Mindspring Enterprises In	53	1/64	85	1/4	9	1/8		-9
Netmanage Inc.....	3	5/16	5	1/4	2	3/32		-5
Netscape Communications C	24	1/2	49	1/2	14	7/8		-1
Network Solutions Inc. Cl	36	31/32	58		11	3/4	92	-8
Newsedge Corporation.....	11	1/2	19	3/4	6	7/16		-7
Onsale Inc.....	25	11/16	36	13/16	5	7/8		-10
Open Market Inc.....	16	3/16	29	1/8	8	7/8		+6
Oracle Corporation.....	23	5/8	42	1/8	17	5/8	31	-3
Psinet Inc.....	10	3/4	15	1/4	4	1/4		-5
Quarterdeck Corp.....	1	25/64	3	9/16	1	3/16		-2
Realnetworks Inc.....	23	1/8	39	7/16	13	1/2		-2
Security First Network Ba	10	1/8	14		5	1/4		-0
Silicon Graphics Inc.....	12		30	5/16	10	15/16		+2
Sportsline Usa Inc.....	27	3/16	39	5/8	7			-3
Sprint Corporation.....	71	7/8	75	5/8	44		36	-2
Spyglass Inc.....	9	3/4	15	3/8	4	1/16		-10
Sun Microsystems Inc.....	40	1/16	53	5/16	30	3/8	22	-3
Vocaltec Communications L	16	3/16	33	1/4	6	3/8		-4
Worldcom Inc.....	45	1/2	46	3/8	27		455	+
Yahoo Corporation.....	109	1/2	129	5/8	20	9/16		-4
Dow Jones 30 Industrials.	8,899.95							-2

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No subject line or body text is required for any of the above instructions. If your particular client requires something to be in the subject line or body of the message, it doesn't matter what text you enter.

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## ROBOT

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perform Yahoo! searches directly from the browser without directly going to Yahoo!'s site.

Both services can be downloaded at no charge from their respective sites.

A similar service named Edison! is designed to make the Web more accessible by assembling a collection of 3,000 links and search utilities.

The site also allows visitors to download a version of Edison! onto their local drive to improve their search time. The downloadable version is available for most platforms in either a zip or self installing format.

Further information on Web robots and search agents can be found at both Search Engine Watch and The Spider's Apprentice.

For more information, visit the following sites:

- Alexa — [www.alexa.com](http://www.alexa.com)
- All-in-One — [www.albany.net/allinone](http://www.albany.net/allinone)
- BotSpot — [www.botspot.com](http://www.botspot.com)
- Edison! — [www.edison.com](http://www.edison.com)
- Excite — [www.excite.com](http://www.excite.com)
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- The Spider's Apprentice — [www.monash.com/spidap.html](http://www.monash.com/spidap.html)
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MAY 17, 1998



## Bacon's



## NET EFFECT

### Use a 'robot' to search the vast Internet

RAFAEL M. ESPINOSA  
Online Editor

In the world of online searching, performing a search on separate engines will often produce extremely different results — and waste valuable time.

With the help of specialized Web robots and powerful search agents, engine sites are now able to provide and pinpoint more exact searches for Web users.

Web 'bots, more popularly known as spiders or crawlers, are bits of automated software used by search engines like Excite and Lycos to explore the Web and retrieve related hyperlinks.

The software generates categorized listings based on instructions provided by a search engine and can be specialized for different purposes.

For example, a bot can be designed to search only those sites containing financial information as opposed to those sites with news or sports data — thereby saving time for Web users by restricting the search to only a certain portion of the Web.

BotSpot's Web site contains a wide collection of Web bots and information on how they function (a complete list of Web site addresses is available

Visitors to the site's BotSpot of the Week Archive can find links to specific bots specialized for different areas of knowledge. The different search areas include commerce, government, news and software.

One robot, URL-Minder, stands out from the rest of the bunch.

The free service consists of a specialized search robot that conducts ongoing searches and keeps track of Web pages for users regardless if they are online or not.

First-time visitors to the site are asked to fill out a short questionnaire and provide e-mail information. Visitors can then enter the urls (Web addresses) for the Web sites they wish to monitor and the frequency of their e-mail updates.

Another unique feature is the ability to monitor only certain portions of Web sites and notify users when relevant information is posted.

Search agents also help make the Web more intuitive by steering Web users to related sites based on their surfing habits.

Two navigational utilities, Alexa and NeoPlanet, consist of small toolbars that work with existing Web browsers. The toolbars accompany the browser and help direct surfers to their next site by providing a list of related links and information.

Alexa's simple interface provides suggestions based on the current site and list the site's owner, address, rating and popularity. Additional information can be found by clicking on any one of these items.

Users also can utilize the service's built-in search capabilities including desktop references like *Encyclopaedia Britannica* and the *Merrill-Webster Dictionary*.

Web novices and children will find NeoPlanet easy to use.

The service, based on channels, provides a listing of related Web sites within nested folders on its control panel. NeoPlanet also allows users to

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MAGAZINE

**MACWEEK**  
San Francisco, CA

Circ— 85,000  
Weekly

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**Bacon's**

## Electric Café to shake up Web graphics with Twitchy

By Rebecca Gulick

Targeting the expanding market for Web graphics software, Electric Café Inc. this month announced an all-in-one tool for creating common Web page elements.

Code-named Twitchy, the product will let advanced and novice Web designers create animated banners, navigation bars, buttons and backgrounds. A pub-

lic beta will be available in July; pricing has not been set.

Electric Café said Twitchy will offer a complete drawing and painting environment, as well as a preview function for interactively balancing a graphic's image quality with download time. It will save images in standard Web formats, such as GIF, JPEG and

*See Electric Café, Page 8*

## Electric Café will serve up one-stop Web graphics tool

From Page 1

PNG (Portable Network Graphics), and offer optimization features, including color palette reduction. Twitchy will also include automatic frame differencing, where only changed portions of an animation are saved.

Electric Café said the software will automatically create image maps when users drop URLs onto graphics. It will parse a graphic, such as a navigation bar, and create an HTML table for it; the code it generates can be dropped directly into an HTML authoring tool. Twitchy will also automate the process of creating JavaScript rollovers, the company said.

Twitchy will let users animate graphics and effects using a simple drag-and-drop interface and make adjustments in the time line as the animation plays. In addition, animation effects such as transitions and motion can be dropped directly onto shapes, and an onion-

skinning feature will let users compare the graphics on previous and future frames, Electric Café said.

In addition, the company said Twitchy will be able to generate graphics that are automatically updated with information from a database, spreadsheet or script. Users will create a template and specify elements such as text, colors and pictures to be updated in the graphic.

"Twitchy was surprisingly cool," said Darian Patchin, product marketing manager at San Francisco-based Alexa Internet, who saw an early version of the software. "It takes the basic functionality of programs like [Adobe] Photoshop and [Yves Piguet's] GifBuilder and combines them into one easy-to-use tool."

Electric Café Inc. of San Francisco can be reached at (415) 675-7480 or (800) 380-3532; fax (415) 675-7490; info@eleccafe.com; [www.eleccafe.com](http://www.eleccafe.com). □ //





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 Chris Home Page 3.0 • Connectix Doubler Pak • The Complete National Geographic • Dogz  
 Microsoft Office 98 • Norton Utilities 3.5 • McAfee VirusScan • Chris Home Page 3.0 • Speed Doubler 8  
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SEARCH options

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Alexa

05-26-98

Alexa Internet

Alexa is a free Internet navigation service. Its toolbar-based interface launches when you start your Web browser to give you background information on many of the sites you visit, including a "thumbs up" or "thumbs down" from other Alexa members who have previously visited the site. In some cases you also get targeted suggestions of where you might want to go next based upon anonymous navigation choices of all Alexa users. Should you navigate to a Website that is currently unavailable, click on a button, and Alexa presents you with a copy of the page directly from its online archive. Alexa also features buttons that connects you to Merriam Webster's Online Dictionary and Thesaurus, and the Encyclopaedia Britannica. Reviewed on Nov 26 1997.

## System Requirements

Windows 95

## Purchase Information

Free

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# Database keeps pages from becoming history



Computer Focus

by Paul Glister

Some years ago, Francis Fukuyama wrote a quirky and fascinating essay called "The End of History," in which he speculated that liberal democracy might be what he called the "end point of mankind's ideological" evolution. Fukuyama's notion is more than a little debatable in the political realm, but you can sketch a different end of history when you consider our increasing reliance on digital materials.

What if we put everything online, from our retail catalogs to our archives, and the hyperlinks that Web users run into every day. Working on a research project, I recently compiled dozens of articles, many of them only available in online form, for my bibliography. Six weeks after finishing the document, I went back to double-check my sources, only to find that three of them were no longer accessible, because of expired links. Where did they go, and how can I cite them in a bibliography if they're going to disappear?

I'm sure you've had the same experience at one time or another. You find a hyperlink to a page that seems ideal for your purposes. But instead of loading the page, your browser displays an error message telling you that the document cannot be found. And here's a statistic that may give you a start: the average Web page has a lifetime of approximately forty-four days. What to do? One solution is to use Alexa, a pro-

gram that taps a vast archive of Web pages, including those that have expired addresses or been removed entirely by their owners. Using Alexa is like having a library of back issues of magazines and newspapers, only for Web pages instead of print. It's a kind of snapshot of the Internet at various points in its history. The free program runs as a toolbar on your desktop and launches when you open your browser.

THE ALEXA database contained, as of late 1997, over eight terabytes of information, considering that the Web is doubling every six months; it should be twice that now. To give you a sense of scale, one terabyte is a million megabytes. A typical public library contains three terabytes of information, while the entire Library of Congress, if reduced to pure text, houses 20. The current Web takes up about five terabytes. I use the term "current Web" because what Alexa's database does is make a complete backup of the Internet every 20 to 60 days. The company, Alexa

Internet, is based in San Francisco and is the branch of Brewster Kahle, inventor of the Wide Area Information Servers system (WAIS) that was one of the earliest Internet search tools. Kahle now provides Alexa to end users and operates it through a huge project called The Internet Archive (www.archive.org).

Kahle is not a believer in history having an end, which is why he insists that we find ways to document and preserve the meta-phenomenon of cyberspace publishing. Already, historian David Allison of the Smithsonian Institution has used materials from the archive to create an exhibit of presidential election Web sites, material that might otherwise pass into oblivion the day after this votes are counted. Think of the 1960 elec-

tion without our access to the presidential debates between Nixon and Kennedy and you begin to see the relevance of saving such information. Web work as well. Alexa will search for any page that has been removed from the Web and display it for you. It's not perfect, for the Web is always growing and the archive can never be complete, but if Alexa can find the expired page in its archive, you can still recover and use it.

OF COURSE, issues of privacy come immediately to mind. What happens if someone creates a Web page with personal information that he or she later wants to remove from circulation? The immediate answer is to make it possible for authors to exclude their material from the archive. In the long run,

numerous questions involving the nature of online publishing and copyright must be resolved by building this archive now. Kahle's company in some ways forces the issue, and it is one of the few database services considering the implications of online data.

But Alexa does more than dig up old Web pages. It also creates "Where to Go Next" suggestions. The software analyzes pages and sees what other pages have links to them. When your browser goes to a particular Web page, Alexa records the visit and the path through related sites, all on an anonymous basis. It also lets users offer their own suggestions about similar pages.

Teachers tell me they're seeing more and more students relying on the Internet for their research; in many cases, the challenge becomes to con-

vince the kids that there are materials in brick-and-mortar libraries and traditional print materials that should be about as relevant as the Internet. Be about any subject. If this trend continues, we'll be missing hyperlinks mean that critical information can be erased in Orwellian fashion, manipulated by business or government to control an outcome?

Now there's an "end to history" that's positively Kafka-esque in its implications, but Alexa is a first-generation tool that points to a possible solution. The program provides background information about each site and quick links to both the online Encyclopedia Britannica and Merriam-Webster's Dictionary. You'll need a 486 or Pentium processor and 3 MB of free disk space to run it. For more information and a free download, go to [www.alexa.com](http://www.alexa.com).

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vote once per site, and currently most sites have very few votes. However, if more people start using the voting capability, it could become a useful way to evaluate a Web site.

#### ADVISOR

The right end of the Alexa bar offers suggestions of other sites to visit, access to the Internet Archives, and quick reference tools. The suggestions for other Web sites are based on travel patterns of other Alexa users. Some are relevant, while others are not. For example, if

It's an interesting idea, but the related link feature is far less practical for navigating the Web than the likes of Yahoo!, AltaVista, or North-eastern Light.

#### ARCHIVE AND MORE

Of far more value is the page icon that can pull up pages from the Internet Archives. This button makes pages available that have been moved, taken down, or are otherwise currently unavailable. When a page is not available, click Alexa's archive button to see what the page used to look like. When it

### *The rating for the number of visits is for the Web site as a whole, based on an analysis of traffic through major Internet hubs.*

you visit the *Washington Post* site, Alexa suggests links to *USA Today*, the *New York Times*, and the *Wall Street Journal*, along with the strange Mr. Media site. From the Online Inc. site, the advisor points to PC Card Bookstore and Virtual Book Stop! of India. Occasionally, the suggested links do not work, display strange characters like `Estuacut;di0s` Disney (which links to Disney's site), or even a link to a bad address.

works, Alexa retrieves the most recent version of the page available from the archive. Unfortunately, for most pages I tried, Alexa was unable to find archive copies. This function still needs refinement, an expansion of the number of accessible pages, and more information, such as the date when the page was archived.

Moving further to the right end of the toolbar, the ER book icon brings up options to search and connect to some standard reference sources

#### Product at a Glance

Alexa  
<http://www.alexa.com>

System Requirements: 486 or higher, Windows 95 or NT 4.0, Netscape 2.0 or higher, or Internet Explorer 3.0 or higher

Price: Free, advertiser-supported

Pros: Access to archived Web pages, reference tools, Web site statistics

Cons: Still buggy, suggestions of related sites not always relevant, runs on limited hardware platforms

including a dictionary, thesaurus, and encyclopedia. The dictionary and thesaurus are available free, but the encyclopedia connects to the full Britannica Online, which is only available to subscribers, or to non-subscribers in a limited version.

Since Alexa is advertiser-supported, ads also appear on Alexa's bar. They are unobtrusive, but easy to see. Click on one, and the advertiser's site appears in the browser. Unfortunately, some ads clicked to dead links with no archive page available. In addition, if Netscape Navigator was in a framed document, clicking on the Alexa ad would place the advertiser's site in only one of the frames.

#### THE BOTTOM LINE

Alexa provides some useful information and connections for the heavy Web user. The software requires minimal effort to download and install, but it takes time to fully appreciate all its features. For the casual Web user, Alexa may be overkill, but for those who regularly need to track ownership and statistics of Web sites, or who may need access to the Internet Archive, Alexa is well worth the download.

Communications to the author should be addressed to Greg R. Notess, Montana State University Library, P.O. Box 173320, Bozeman, MT 59717-3320, 406/994-6563, [align@montana.edu](mailto:align@montana.edu), <http://imt.net/~notess/>.

Where to Go Next

#### ADD A LINK TO THIS LIST...

LEXIS Document Services

Home

Counsel Connect

Library of Congress Home Page

InfoTrac Homepage

Legal information institute

The Law of Cyberspace (Internet resources)

American Intellectual Property Law

Association (AIPLA)

AltaVista: Main Page

EUnet sterreich

The Where To Go Next advisor display from the LEXIS-NEXIS page





# Technology | Tom Watson

Alternative doorways to the Internet are popping up in the spirit of free-flowing information.

THERE were only a few snickers last week at a new-media conference in Chicago when someone asked a group of executives from Web-search companies which of them would be the first to buy a major television network. It was a sign of just how quickly the likes of Yahoo, Lycos, Excite and Infoseek have grown, how grand their mass media dreams have become and how much their original vision of the World Wide Web has changed.

No longer content to direct a user to the Web sites most relevant to the individual's interests and tastes, the former search services are intent on creating "portals" to the Internet, complete with dial-in service, free E-mail and personal Web pages, paging and messaging, customized news, local weather and stock tracking. The aim: get the suckers under the tent and keep them there. That's a radical departure from the original business model of catching the customer's eye on the way to other sites.

The original search model was deeply steeped in the Internet ethos — the idea that information and traffic flows freely from site to site and value is added by serving that urge, not resisting it. It is an ethos that favors entropy over organization, an open range of Web publishing compared with the stockyard chutes of the portal sites. And it is an ethos that for many in the Web business still endures — despite the portal fad.

"There are between 5 and 10 million content areas on the Web, and in many ways the Internet is more like print publishing," observed Brewster Kahle.

Mr. Kahle is an Internet pioneer whose 1989 invention, the Wide Area Information Server — or WAIS — was a pre-Web system for searching distant data bases on the Internet. He later sold his on-line and software publishing company, WAIS Inc., to America Online.

The main portals are following a model that mimics the control and distribution of cable television networks. But Mr. Kahle thinks that is the wrong model. "There are 16,000 journal publishers in print, real diversity. And everyone's experience is different. Do we need a TV Guide? I think we need something a little more sophisticated."

Certainly the current search services are far from exhaustive. A study released last month by the NEC Re-

search Institute of Princeton, N.J., indicated that even the most thorough service, Hotbot ([www.hotbot.com](http://www.hotbot.com)), has indexed only 34 percent of the Web's estimated 320 million pages.

But Mr. Kahle is hardly a disinterested observer. He is the president and co-founder with Bruce Gilliat of Alexa Internet, a two-year-old start-up company based in San Francisco. Their product is Alexa, part Web browser, part navigation service. Users download the software from [www.alexa.com](http://www.alexa.com) free, after which Alexa manifests itself as a thin toolbar under the regular Web browser — whether the PC is using the Netscape Navigator or Internet Explorer from Microsoft.

Alexa offers quick access to information on each site visited (who owns it, how much traffic it gets, and how Alexa users rated its content), provides links to other similar sites and, lately, tiny advertising messages keyed to the user's browsing selections. About 350,000 copies of the program have been downloaded and there are 100,000 regular users, according to Mr. Kahle.

Alexa is a geeky end-run around the sleek mass media dreams of the search engine companies. While Excite, Yahoo, Lycos and Infoseek are adding as many features as possible to keep users on their sites for as long as possible, Alexa encourages wide and frequent grazing by recommending sites wherever the user's interests may lead, based on the person's past preferences — and based on the preferences of other users who have frequented the same sites.

Mr. Kahle calls this approach "contextual navigation." The more users in Alexa's data base, the better the similar-preferences software works — and the more precisely that Alexa can tailor its ads to individual users. In other words, the more that users surf outside the main portals, the better Alexa's revenue stream.

Alexa is named for the library of Alexandria, the ill-fated attempt of the ancient Greeks to amass all of the literate world's printed knowledge. And in keeping with this ideal, Alexa brings the emphasis in Web navigation back to content — not just a reader's digest of the Web.

And yet, in choosing to name his venture after an ambitious idea that ultimately fell short, Mr. Kahle is im-



Stuart Goldenberg

PLICITLY conceding that the sheer size, growth, and second-to-second mutability of the Internet makes it almost impossible to amass the collected works of the Web. The reason the current search services consistently rank among the most popular Web sites is that many people presumably do want some winnowing.

But the mass-market model need not be the only portal approach. "We believe that people are more in need of filters than catch-alls," said Rufus Griscom, co-founder of the artily erotic on-line magazine Nerve ([www.nervemag.com](http://www.nervemag.com)). That is why Nerve, which bills itself as "literate smut," has created its own, more narrow portal: a directory of sexually oriented Web sites.

And Nerve it is not alone in providing a narrower doorway to the Web. Alternative portals are everywhere, including Razorfish's "Disinformation" search engine ([www.disinfo.com](http://www.disinfo.com)) that provides links to various subculture sites, and "John Skilton's Baseball Links" ([www.baseball-links.com](http://www.baseball-links.com)), perhaps the most complete guide to baseball on the Web.

These alternate portals are evidence of the Internet ethos that refuses to conform to a mass media structure. In their race to emulate mainstream media giants like Time Warner, CBS and Disney, the search engines may be forgetting the very phenomenon that brought them into being: the Internet is a medium of creators as much as it is a medium for consumers.

Tom Watson is editor and co-founder of @NY ([www.atnewyork.com](http://www.atnewyork.com)), an information service that focuses on New York's interactive industry.





## TECHNOLOGY JOURNAL / NET INTEREST

### WATCHING THE WEB

BY THOMAS E. WEBER

#### FAMILY-OWNED BUSINESS

**NETMARQUEE FAMILY BUSINESS** Operators of family businesses can read about trends and strategies at this site produced by a Web-publishing and marketing company. Interesting information is scattered throughout the site, but digging it out requires some work. The News and Comment section offers a weekly digest of articles from different sources. The articles cover a mix of topics concerning small businesses and family-owned businesses, though considering the site's title, an even tighter focus on family companies would be nice. For in-depth reading, click on the Article Search option for access to a database of research. You can search by keyword, but you'll probably have more luck by clicking on one of the predefined searches, such as "sibling rivalry" and "estate planning." The NetCenter also includes links to a variety of university centers devoted to studying family businesses.

<http://fmq.com>

**ARTHUR ANDERSEN CENTER FOR FAMILY BUSINESS** Big Six accounting and consulting firm Arthur Andersen has created this site, which family-business operators will probably find a worthwhile stop. One main feature: the results of a detailed survey of 3,000 family businesses. For family-business operators, the results can serve to provoke questions or suggest possible actions. For instance, the survey explains what family-business operators are thinking about corporate structure and estate planning. It also offers data on the growing role of women in family companies. In a separate link from the home page, the Keys to Family Business Success department discusses such questions as whether to create a charitable foundation or even whether to sell the family business. A special section on succession looks at finding advisers, keeping the company ownership structure simple and adding outside directors to a company's board.

[http://www.arthuranderson.com/bus\\_intel/services/cfb/index.htm](http://www.arthuranderson.com/bus_intel/services/cfb/index.htm)

**AUSTIN FAMILY BUSINESS PROGRAM** This site comes from a special family-business program at Oregon State University's College of Business in Corvallis, Ore. Much of the site's offerings are local—such as a calendar of events for family-business operators. But there's also enough general information to make this site worth a stop for visitors outside Oregon. Click into the Information by Topic section for general discussions on everything from human resources to family relationships. The discussions include links to related articles.

[http://www.bus.orel.edu/fam\\_bus/afbp/home.htm](http://www.bus.orel.edu/fam_bus/afbp/home.htm)

**ANCHORED DREAMS** A different kind of family-business site, Anchored Dreams focuses on couples starting or running their own companies. Produced by the author of a book on the subject, the site looks at common mistakes ("not involving... spouse enough") and questions to ask to determine whether your relationship can handle starting a business. Updates are rare here, but much of the information isn't time-sensitive.

<http://www.itbn.com/azriela/>

#### BARBECUING AND GRILLING

**WORLD WIDE WEBER** This site, from the manufacturer of Weber grills (no relation to the author of this column), offers plenty of tips for backyard chefs. The section of recipes includes a special section on preparing ribs—"please don't pre-cook your ribs," the site advises. There's also a nice selection of grilling tips, but they're presented a bit awkwardly. You don't get the chance to select the tips you're interested in from a menu. Instead, you'll need to cycle through each tip to see them all. Also helpful: a chart that lists cooking methods and times for different meats and vegetables.

<http://www.weberbbq.com>

**LET'S Q** You won't find any frills at this site—just recipes and links. And don't get confused: The subject here is not grilling. It is barbecuing, slow cooking meats with wood smoke. Most of the re-

levant information is packed into a list of FAQs, or frequently asked questions, compiled from an on-line barbecue discussion. Learn about different kinds of smokers, which kind of wood to use and how to build a pit. The FAQ list also takes you through the cooking procedures for every conceivable variety of meat.

<http://www.eaglequest.com-bbq/index.html>

#### ROLLER COASTERS

**THRILLRIDE** If this summer promises the chance to ride a few roller coasters, you find the possibilities at this site. You'll find lovingly written descriptions, penned by an enthusiast, of roller coasters and other theme-park thrill rides. In addition to write-ups that chronicle every twist and turn on individual coasters, ThrillRide also offers news and rumors about attractions under development. There's just one problem: ThrillRide's front page lists every option at the site one long, long list that will keep you scrolling forever. In other words, watch out for that front page—it's a doozy.

<http://www.thrillride.com>

**ROLLER COASTER DATABASE** To get really choosy about rides, consult this database of 450 roller coasters. You can enter the type of roller coaster you're looking for (wooden, inverted, etc.) or the park or state you'll be visiting, and then see a report of the available coasters.

<http://rollercoaster.net>

### A CLOSER LOOK

#### A Guide to the Web

**GOOD ADVICE IS HARD TO FIND.** That makes Alexa, a unique Web-search tool, a helpful companion.

Alexa (<http://www.alexa.com>) is another variation on what the tech-savvy types call collaborative filtering. That means Alexa draws on the experiences of all its users to recommend sites you might find interesting. The problem with such systems: Without lots of users, they just don't work well—think of a survey in which only a handful of people are polled. When Alexa first showed up last year, that was the case. But now, after months of Web-crawlers using Alexa, the recommendations are starting to show some promise.

To use Alexa, you visit its Web site to download a special piece of software. Once you've installed the program, a small toolbar appears below the window of your Web browser. Each time you call up a Web page, the Alexa window suggests other sites you might want to visit. (Of course, there's no such thing as a free lunch—the Alexa window also displays constantly changing ads.)

When it comes to major sites, Alexa's recommendations are often squarely on target. Call up Microsoft Corp.'s CarPoint automotive site, for instance, and Alexa suggests looking also at the Edmund's and Kelley Blue Book sites—both excellent car-shopping resources. But venture to a less popular site and you may find yourself on your own. Alexa was speechless when it came to the official site for the "Dawson's Creek" television show.

The Alexa toolbar includes some other nifty functions. It can tell you how popular a site is and who created it. Click on a button labeled "EB" and you can access Brit Encyclopaedia Britannica entries or look up words in a dictionary. Most impressive of all, thanks to an archive of Web sites, Alexa can sometimes pull up Web pages for you even after they've been deleted.

Alexa's functions don't always work perfectly. But its recommendations can often be helpful, and its slender window takes up only a fraction of your screen. That adds up to a search tool worthy of a test drive.

We welcome any comments. E-mail us at [netinterest@news.wsj.com](mailto:netinterest@news.wsj.com)

3985 A

"Online" (Wilton, CT)  
June 1998

# FOCUS ON

**ONLINE**  
FORUMS FORUMS

Alexa: Web Archive, Advisor, and Statistician

TableBase: Numeric Tables Online

Opera—The Little Browser That Can

## Alexa: Web Archive, Advisor, and Statistician

by Greg R. Notes

**T**he interconnected nature of the Web and the availability of advertising-supported services stimulates some creative ideas for finding information on the Web. Now, from Brewster Kahle, the originator of WAIS and founder of the Internet Archive, comes Alexa. This intriguing Web tool functions as a statistical information source for Web pages, an advisor suggesting related Web sites, and an archive of the Web of the past.

Alexa shows up on the screen as a thin toolbar, running in conjunction with a Web browser (minimum of Navigator 2.0 or Internet Explorer 3.0). The toolbar floats above or near the browser window, but can be moved anywhere on the desktop. Currently, Alexa only runs on Windows 95, but perhaps by the time you read this, it will also be available for Macintosh and UNIX systems.

### STATISTICS

The Alexa toolbar makes excellent use of screen real estate while

your browser is open. Almost every part of the bar is clickable. The left end, Where You Are, provides basic information about the site. The two lines of information on the left show the domain owner's name and a measurement of how frequently the site is visited. Click on the sideways arrow for more detailed information about the site. Note that this detailed information is about the entire site, not just the page currently displayed. The rating for the number of visits is for the Web site as a whole, based on an analysis of traffic through major Internet hubs. The ownership information is culled from InterNIC records. Other site statistics include the number of pages indexed on the site, the speed

Click any item for more details.

#### RATINGS

Visits: 500000

3 Like, 0 Dislike

Alexa Visits: 1,408

#### SITE OWNER

Lexis-Nexis

9333 Springboro Pike

Miamisburg, OH 45342

Phone: 937.865.7803

#### STATS

Pages: 1,425

Speed: Average

Freshness: Fresh

Where You Are

The Where You Are statistics display for the  
LEXIS-NEXIS site

of the site's server, and a measure of "freshness."

Alexa users can vote on how well they like a site. Each user can only



The main Alexa toolbar

ONLINE  
FOR THE  
HEALTH  
CARE  
INDUSTRY

## Opera—The Little Browser That Can

by Gary Price  
The George Washington University

**D**espite a minimal cost (\$30) and small size (1MB), Opera is a World Wide Web browsing tool that gives a stellar performance. While the product presently appears only on the Windows 95 and Windows 3.1 platforms, Opera might be an excellent choice as a primary or secondary browser, depending on your needs and resources.

### CURTAIN UP!

I first saw reviews of Opera on a library listserv in the fall of 1997. This review is based on a beta version of the soon-to-arrive version 3.0; it can be easily and quickly downloaded from the Web site (<http://opera.nta.no>). Developed and written by Opera Software AS in Oslo, Norway, the program is shareware. A fully-functioning 90 day evaluation copy is available; after the witching hour the program renders itself unusable unless purchased.

I ran it on a Pentium with 16MB of RAM, but the company proudly states that Opera runs well on 386sx machines with as little as 8MB of RAM, and can even run with as little as 4MB. This makes Opera an excellent choice to run on older machines that have not been upgraded and cannot effectively handle Netscape Navigator or Microsoft Internet Explorer. For organizations such as educational centers, other non-profits, and older parents who have inherited their adult children's castoff computers, Opera might be a great option.

### OPENING ACT

Despite its small size, Opera has clearly labeled buttons and options, and handles work on the busy desktop very smoothly and efficiently. The display bar is an information center all its own and can easily be moved to the top or bottom of a window. The bar tells you how much time a page has been loading, how many bytes per second are being received, the number of images to be

loaded, and how much of the text has been loaded.

Opera allows for the bookmarking of sites with a feature called "Lists." Lists and sublists can be made, but bookmarks from Netscape Navigator and Microsoft Internet Explorer cannot be imported without obtaining an additional piece of software. For those in networked environments, Opera allows for a system-wide list of sites.

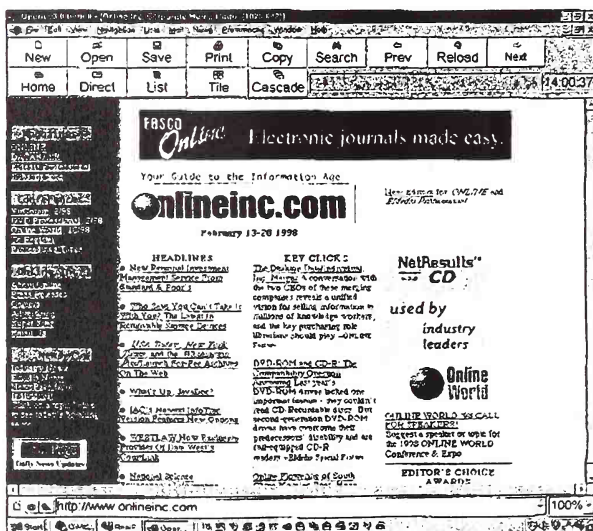
### IT SINGS!

My beta version worked well with numerous plug-ins and it handled Web pages with frames without a problem. Its customization options

for individual or group usage are wonderful. Just about everything the program offers—from associating programs, such as Real Audio and Adobe Acrobat, to choosing not to accept cookies, is done easily and quickly. Additional customization options include a toggle to turn off all graphics and page backgrounds as the page is loading, the ability to toggle the menu bar on or off the screen, and the option to make active links stand out via a 3-D view, to name just a few.

Perhaps the most useful customizable feature is the Opera cache. You can choose whether or not to cache images, text, or other page features. You are also given the option to have the cache clear itself automatically upon exiting the program. These features contribute to making Opera an excellent option for both kiosk usage and as an offline browser—it

*Opera [is] an excellent choice to run on older machines that have not been upgraded and cannot effectively handle Navigator or Explorer.*



The Online Inc. home page as seen through the Opera Web browser



FOCUS ON

does not require telecommunications software to operate. Documentation is provided via a Help function, a Web accessible bulletin board, and a mailing list, and fee-based consultation makes even more customization opportunities available.

### INTERMISSION

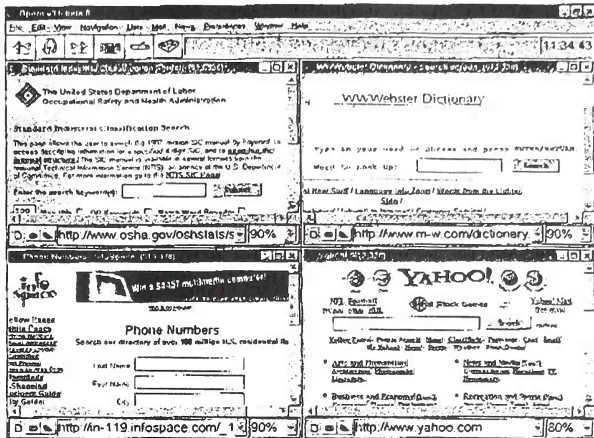
Of course Opera does not have all the bells and whistles that Netscape Navigator/Communicator and Microsoft Internet Explorer do. In fact, it is difficult to make comparisons because Opera does so much with so little. Nonetheless, limitations must be noted.

Opera lacks an incoming mail program, although an outgoing mail window is provided. Other mail products (Pegasus, Eudora, etc.) may be associated with the program to run at the appropriate time.

Opera is Javascript-ready, but does not run Java. I did not find this to be that large of an issue, at least at the present time.

Perhaps the worst inconvenience is that Opera's newsreader does not allow for downloading and reading news offline—news group postings must be read while connected to the Internet.

Finally, the program does not access Gopher/WAIS sites without configuring a proxy server to reach them. Again, this does not pose as large a problem as it once would have, since a great deal of the material



Working with multiple open "Stages" in Opera

available via Gopher has migrated to WWW servers.

### ORCHESTRATING A REPRISE

An especially useful feature is the ability to have numerous pages or windows opened simultaneously. These windows (Opera stages) are viewable on the main program screen and can be tiled or cascaded for a quick overview look. For those who monitor numerous news sources on a constant basis, this

### AFTER THE SHOW (THE BOTTOM LINE)

Some would say that Opera's competitors are essential products that are on almost every user's desktop, so why is this product necessary? If space, ease of use, and several unique features are important to you or your applications, Opera is worth knowing about. With a 90-day free trial and a simple download/installation process, it may be worth your while to invite Opera to perform on your computer.

### ENCORE!

Opera's development team realizes that some WWW users are disabled and addresses some special problems by making all of Opera's functions available via either mouse clicks or keyboard commands. The browser also has the ability to view pages with a magnification feature that can increase or decrease a page's size on the screen between 20% and 1000% of actual size.

Communications to the author should be sent to Gary Price, Subject Specialist, George Washington University-Virginia Campus Library, Ashburn, VA 22011; 703/729-8235; Fax 703/729-8237; gprice@gwia2.circ.gwu.edu.

### Product at a Glance

#### Opera

http://opera.nro

Price: Fully-functioning 90-day free trial; \$30 to register.

Pros: Small size (only 1MB) Web browser with numerous customization features and full functionality via keyboard commands

Cons: No outgoing mail program; no Java; Usenet news must be read online

feature can be very useful. Couple this feature with the many news sites that use the meta-refresh tag (which Opera handles) and you have a continually updating news resource. If meta-refresh is not available or you want to update all open windows at the same time, you can do it with a single keystroke. Although working with several open windows is a bit confusing at first, it becomes a big time-saver after a short time. I have easily designed a program screen of my frequently accessed sites.

## The Internet

# Services aim to give searchers directions

By Paul Bissex

SPECIAL TO THE TRIBUNE

When I first started playing with the Web in 1994, I collected a lot of paper, from photocopied magazine listings of sites down to notepad scraps with handwritten Web addresses. I had a folder for all these pieces of paper. Though I rarely opened it, it gave me the sense that I could find what I needed in this strange new medium.

Of course, I soon learned the lesson that every World Wide Web aficionado learns: paper listings and manuals are the training wheels of the Web. There's no point in laboriously typing in URLs when lists of sites abound on line.

No self-respecting site is without a list of pointers to other sites of interest. In fact, the first project many amateur Web authors attempt is a nothing-but-links site. Some users even post a copy of their browser "Favorites" or "Bookmarks" for all to see. And even when a list structure isn't used, it's a rare site that doesn't point to several other sites.

Producing lists and selecting pointers is work. It produces something that wasn't there before, ideally something useful. Anyone who has done a significant amount of research on the Web has benefited from lists that others have made.

It's ironic that the best lists are so rarely found in the places that purport to provide them: search sites (or "Web portals" as they now want to be called) such as Yahoo, Lycos, and Infoseek. The whole point of searching is to get addresses of sites that are relevant to a specific question, yet search results are notoriously uneven.

According to a recent report by the electronic Journal Edupage, researchers at IBM and at Cornell University are working on a relatively simple solution to this problem. They have collaborated to produce a new filtering technology that actually taps into the collected wisdom in all those human-made lists and links.

What the new technique does, essentially, is rank sites based on their popularity among their peers. It begins with an ordinary keyword search, then finds cross-references among the results. In other words, it finds a group of potentially relevant sites and then picks those most linked to by the members of the group itself.

Other projects have tried

extracting useful information from a mass of digital opinions. Firefly Networks, an MIT startup recently bought by Microsoft, spent a lot of time and money promoting its "collaborative filtering" system. Firefly can offer recommendations on anything, in theory: books, movies, Web sites. It works by soliciting the opinions of users (who are identified to the system via a special "passport"), then making recommendations based on the preferences of people who like the same stuff you like.

I recently played with a Yahoo/Firefly joint project designed to suggest interesting new Web sites. It got a rough idea of my interests by noting the 523 different sites in my Netscape Bookmark file and asking me to rate the most prominent ones. Then the service started recommending sites, giving me the chance to rate each one as I viewed it.

Behind the scenes it was saying, more or less, "This guy likes the Web zines [magazines] Salon and Feed; a bunch of other users who like Salon and Feed also like Slate, so let's recommend that."

The system actually suggested many sites that I like but which were not in my bookmark file—a pretty good indication of its reliability. Of course, there were many duds, too, and the rating process was tedious.

Another interesting product is a free Web browser add-on called Alexa. Developed by renowned Internet archivist Brewster Kahle in San Francisco, Alexa's unobtrusive window gives you information about each site you visit, most notably its popularity with other users of the Alexa service. You can add your own opinion with a click. Alexa will also make suggestions about what sites you should visit next.

The catch-22 most of these services face is that they aren't very useful or rewarding to the user without gobs of data, and most people aren't going to invest time plugging in that data without a clear reward.

That's the beauty of the IBM/Cornell approach. Rather than soliciting explicit recommendations or feigning human intelligence, the search services of the future may work by seeking out the wisdom that's already there.

You can pick up a Firefly passport ([www.firefly.net](http://www.firefly.net)) if you want to try its services first-hand. A free copy of Alexa can be downloaded from the Alexa site ([www.alexa.com](http://www.alexa.com)).

Chicago Tribune  
June 1, 1998



MEDIA

MUST READ

# Rhapsody in Bluescreens

In the beginning, there was the studio back lot. Then movies went on location. Now sets can be generated on workstations, and only the camera and talent are needed. What studios crave are virtual sets that seamlessly combine footage of actors in real time.

In April the industry took a giant step closer to this techno nirvana. Tel Aviv-based entertainment firm RT-SET, in partnership with New York's 3DV, a manufacturer of virtual sets for TV broadcasting, claims to have developed a real-time system for film.

Here's how the technology works: First, a digital set is "built" in an SGI Onyx2. Then, in order to blend the live action and the virtual set, cameras are fitted with robotic heads, transforming them into motion-control cameras. "You can pan, tilt, and zoom the camera, and the virtual set will follow," explains 3DV president Al Rocco (left).

"The system raises the bar for what's possible in real time," says Greg Estes, SGI's director of entertainment marketing. Still, he doesn't predict a cinematic revolution just yet. "I think the coolest immediate application will be digital dailies, where the James Camerons of the world can get a close approximation of what a shot could look like for real. But with the luxury of time, you can do a lot of things you can't do at 24 frames per second," such as detail renderings and compositing.

The producers of the *Star Wars* prequel are rumored to be doing just that. "We're in negotiations now for the first use on film," says Alon Carmeli, RT-SET's vice president of marketing. "This technology needs the support of talented filmmakers to create what could become a whole new film language." — Ron Magid

## Movie Commander

**T**he movies I love and the games I love both share the same quality," says videogame auteur Chris Roberts. "They believably create an alternate universe I can escape to, whether it's for two hours at a movie theater or 20 hours in front of my computer."

This summer, the 30-year-old Manchester, England, expatriate gets a chance to test his ideas about cross-media storytelling as he begins postproduction on *Wing Commander*. This 20th Century Fox movie, based on Roberts's best-selling computer game, is the first feature to be directed by a game creator.

Digital Anvil, Roberts's new Austin, Texas, game and movie production house, will generate special effects derived from the computer game's design.

— Matthew Hawn

## Mortal Media: From Data to Dust

**L**ike a loose thread on an ancient knit sweater, the 1s and 0s of digital documents can come undone over time, turning precious files into an incoherent jumble. Durable, long-term storage media aren't easy to come by.

Inexpensive CD-ROMs can become unreadable after only five years, although high-end products recently introduced by Kodak are intended to last 100 to 200 years. Of course, even if you do keep a disc for that long, there's no guarantee that the technology to play it will still be around or in working order.

Brewster Kahle, founder of Alexa Internet, a digital archive of the entire Web, has done a lot of thinking about this problem. "The general consensus among archive folks out there is that a long-lasting media type is not the answer." So Kahle has committed resources to back up or translate his

CD-ROM	5-200
Newspaper	10-20
Data-grade VHS tape	10-30
Digital linear tape	10-30
Magnetic tape	10-30
Microfilm	10-500
Kodachrome slides	100
High-quality acid-free paper	100-500
HD-Rosetta	1,000+
Egyptian stone tablets	2,200+

\*Depends on storage conditions.

multimillion-dollar digital library every 10 years, "because if the media doesn't degrade," he says, "the platform will become extinct."

For those who can't manage long-term care and feeding of archives, the best bet may be good old retro analog. Norsam Technologies just released HD-Rosetta, a 2-inch nickel disc that its maker claims will be able to store up to 95,000 pristine images for more than 1,000 years. No digital equipment is needed to read the disc — just a big microscope. — Amy Johns

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NETSCAPE CHANGED ITS FISCAL YEAR

NET INCOME FROM APRIL INCLUDES \$8.3 MILLION FROM THE SALE OF SECURITIES  
SOURCE: NETSCAPE

**N**etscape Communications Corp. last week reported it broke even for its most recent quarter, with net income of \$8,000 on revenue of \$127.2 million for the three months ended April 30, 1998.

The results were slightly better than Wall Street had expected, but it was hard to get a good fix on the company's financial health because of a shift in fiscal years. And they did little to alleviate concern over Netscape's long-term prospects or to prove whether it is successfully making the transition it began in January when it stopped selling its browser.

The company said in February it was changing its fiscal year from the

Netscape reported an operating loss of \$10 million in its new second quarter, offset by \$1.7 million in interest income and \$8.3 million from the sale of securities, which it declined to identify immediately.

"These results show they're not tanking," said Ted Schadler, an analyst at Forrester Research. "They're marching forward, but they're not out of the woods yet."

Analysts were not entirely certain how to interpret the results. Netscape declined to restate historical data to reflect the new fiscal year, which leaves no historical

comparison to the comparable period a year ago or to what would have been the most recent new fiscal first quarter of November, December, and January.

"It's hard to draw conclusions," said Andrea Williams, an analyst at Volpe Brown Whelan & Co. "Not restating historical estimates is not the most Wall Street-friendly answer."

Netscape did not specify what accounted for the January loss, though it listed a \$12 million non-recurring restructuring expense as a line item. January was also the first month the company had no browser revenue after deciding to give away the

## UPDATE | Netscape Unveils An Array of New Features For Its Netcenter Hub Site

By Whit Andrews

**I**T IS TELLING that Netscape, in describing what a year ago would have been called browser features, announced last week what it said are new features of its

destination site, Netcenter [See "Netscape's Netcenter Faces Battle To Retain Its Status as a Top Site," March 16].

Not all the changes that are expected to be in Netcenter soon will be browser-driven. In particular, Netscape's new personalization technology—which will serve users of e-mail accounts, forum identities, and personal news pages—will be almost purely site-related.

But major changes described for Netcenter include:

- A browser component that will aid surfers in finding sites similar to any they are visiting, using technology and an index licensed from agent startup Alexa (and returning the resulting clickstream database to Alexa for its use).

- A component update service that will notify users of updates to Netscape software and components made to work with it, in an effort to streamline the process

of getting plug-ins.

- A search-from-the-toolbar option that harks back to an initial appear-



Many of the new features are browser-related, although Netscape is marketing them as components of Netcenter.

ance in a beta build of Netscape 2.0 in late 1995. In this incarnation, the search box will seek keywords first in the InterNIC site database, then in a trademark database, then via enhanced Excite search, and then via a Net Search partner.

"I think one of the things we've found in user testing is that new users have trouble determining the difference between the location bar and a search box," said Jennifer Bailey, vice president of marketing for Netcenter. The feature seeks to erase the confusion by combining the two.

The simplified search and sites-like-this features will benefit Netcenter by recommending its channels and features in which surfers might be interested, Bailey said. The features will be introduced in an incremental update of Navigator scheduled for this summer.

search: BROWSERS

## IBM Strengthens With Messaging

By Anna Maria Virzi

**I**BM'S PURCHASE of two companies that provide real-time communications software is aimed at bringing that technology to the company's Lotus groupware package.

IBM recently announced that it will purchase DataBeam, a Lexington, Ky., company that develops real-time communication and distance-learning servers, and Ubique, a Rehovot, Israel, company that develops instant messaging and chat software. America Online, an investor in Ubique, relinquished its interest in the company. Financial details of the acquisitions were not disclosed.

IBM executives said they expect some of the new technologies will be included in Notes and Domino 5.0, expected to ship later this year.

Mike Zisman, Lotus executive vice president of strategy, said DataBeam's technology can be

LINKS FROM THIS PAGE

Alexa—www.alexa.com

DataBeam—www.databeam.com

IBM—www.ibm.com

Internet Inc.—www.iiat.com

Netscape Communications Corp.—home.netscape.com

June 1, 1998

Bacon's

3985-A

Raleigh, NC  
May 17, 1998

# Program protects old Web sites from oblivion

Some years ago, Francis Fukuyama wrote a quirky and fascinating essay called "The End of History," in which he speculated that liberal democracy might be what he called the "end point of mankind's ideological evolution." Fukuyama's notion is more than a little debatable in the political realm, but you can sketch a different end of history

## COMPUTERS



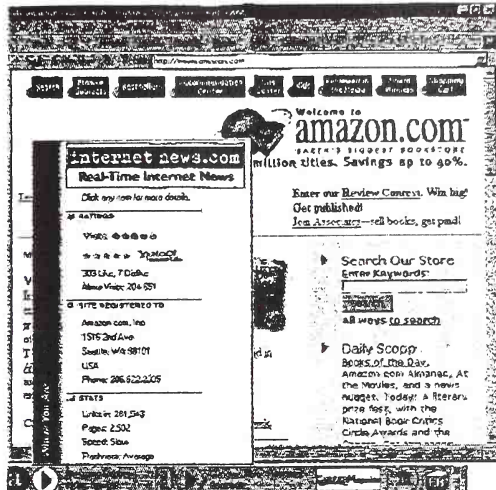
Paul Gilster

when you consider our increasing reliance on digital materials. What if we put everything online, from our retail catalogs to our archives, and the hyperlinks fail?

It's a problem that Web users run into every day. Working on a research project, I recently compiled dozens of articles, many of them only available in online form, for my bibliography. Six weeks after finishing the document, I went back to double-check my sources, only to find that three of them were no longer accessible because their links no longer worked. Where did they go, and how can I cite them in a bibliography if they're going to disappear?

I'm sure you've had a similar experience. You find a hyperlink to a page that seems ideal for your purposes. But instead of loading the page, your browser displays an error message telling you that the document cannot be found. And here's a statistic that may give you a start: The average Web page has a lifetime of approximately 44 days. What to do?

One solution is to use **Alexa**, a program that taps an online archive of Web pages, including those that have changed address or been removed entirely by their owners. Using Alexa is like having a library of back issues of magazines and newspapers, only for Web pages instead of print. It's a kind of snapshot of the Internet at various points in its history. The free



Alexa is a software program that keeps an archive of Web pages. It's a free program that runs as a toolbar on your desktop.

program runs as a toolbar on your desktop and launches when you open your browser.

The database Alexa consults contained, as of late 1997, over eight terabytes of information; considering that the Web is doubling every six months, it should be twice that now. To give you a sense of scale, one terabyte is a million megabytes. A typical public library contains three terabytes of information, while the entire Library of Congress, if reduced to pure text, houses 20. The current Web takes up about five terabytes.

I use the term current Web because what Alexa's parent company does is to make a copy of the Internet every 30 to 60 days. The company, Alexa Internet, is based in San Francisco, and is the brainchild of Brewster Kahle, inventor of the Wide Area Information Servers system (WAIS) that was one of the earliest Internet search tools. Kahle now provides Alexa to end users and operates the database that feeds it information, a huge project called The Internet Archive

(www.archive.org).

Kahle is not a believer in history having an end, which is why he insists that we find ways to document and preserve the mutable phenomenon of cyberspace publishing. Already, historian David Allison of the Smithsonian Institution has used materials from the archive to create an exhibit of presidential election Web sites, material that might otherwise pass into oblivion the day after the votes are counted. Think of the 1960 election without our access to the presidential debates between Nixon and Kennedy and you begin to see the relevance of saving such information.

And it works for everyday Web work as well. Alexa will search for pages that have been removed from the Web and display them for you. It's not perfect, for the Web is always growing and the archive can never be complete, but if Alexa can find an expired page in its archive, you can still recover and use it.

Of course, issues of privacy come immediately to mind. What

happens if someone creates a Web page with personal information that he or she later wants to remove from circulation? The immediate answer is to make it possible for authors to exclude their material from the archive. In the long run, numerous questions involving the nature of online publishing and copyright must be resolved. By building this archive now, Kahle's company in some ways forces the issue, and it's one that needs fast resolution considering the impermanence of online data.

But Alexa does more than dig up old Web pages. It also creates "Where to Go Next" suggestions. When your browser goes to a particular Web page, Alexa records the visit and the path through related sites, all on an anonymous basis. The software analyzes pages and sees which other pages have links to them. It also lets users offer their own suggestions about similar pages.

Teachers tell me they're seeing more and more students relying more on the Internet for their research; in many cases, the challenge becomes to convince the kids that there are material in brick-and-mortar libraries — traditional print materials — that should be examined before jumping to conclusions about any subject. If this trend continues, will a missing hyperlink mean that critical information can be erased in Orwellian fashion, manipulated by business or government to control an outcome?

Now there's an "end to history" that's positively Kafkaesque in its implications, but Alexa is a first-generation tool that points to a possible solution. The program provides background information about each site and quick links to both the online Encyclopedia Britannica and Merriam-Webster's Dictionary. You'll need a 486 or Pentium processor running Windows 95 and 3 MB of free disk space to run it. A Mac version is in the works. For more information and a free download, go to [www.alexacom.com](http://www.alexacom.com).

Paul Gilster may be reached at [gilstermindspring.com](mailto:gilstermindspring.com)



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## Business & Stocks

*Posted at 8:15 p.m. PDT Sunday, May 31, 1998*

# Netscape to boost site features

**'Smart' searching for the Net**BY JODI MARDESICH

Mercury News Staff Writer

Netscape Communications Corp. will announce today three new services that make it easier to find things on the Web, make the browser into a kind of living desktop and simplify the process of upgrading to new software versions.

The changes -- for users of Netscape's browser on the company's Web site -- are part of the browser pioneer's new strategy to turn its traffic-intensive site into a lucrative "portal" or Internet launching point. Netscape has been overhauling its business as competition with Microsoft Corp., Yahoo Inc. and Excite Inc. intensifies.

The new services on Netscape's Netcenter Web site include:

"Smart browsing," a method of quickly finding sites without knowing cryptic Web addresses or URLs. By typing "Ford" into the space you normally would key in the traditional URL, you'd go to Ford's Web site. A "What's Related" button will show users other suggested destinations.

Personalized home pages. Netscape will launch My Netscape, "a desktop on the Internet," said Mike Homer, Netscape's executive vice president and general manager. The desktop, which can be arranged by consumers, can include stock quotes, news and small "weblets," or mini-applications. In its example, Netscape showed a small calculator running on the Web desktop. "It will grow to include Web-based applications," Homer said.

Smart Update. Netscape will send users e-mail notification when new versions of their applications are available. Homer said that by clicking on a button in the e-mail, users can update their software.

The new services will be live on Netcenter by the end of July.

As it adds synergy between the browser and Netcenter, Netscape

[Adam Lashinsky](#)[Chris Nolan](#)[Cheryl Shavers](#)[Contact Us](#)[About this page](#)

As it adds synergy between the browser and Netcenter, Netscape risks alienating its partners, which also are competitors, said Barry Parr, director, consumer Internet for International Data Corp. "The risk for them is that they wind up doing something that's driven a lot more by deals than it is by what their customers want," Parr said.

Homer countered, saying that users often don't know what's the difference between the browser and the site.

By adding features to the browser that are tied to Netcenter, Netscape appears to be doing what it is accusing rival Microsoft Corp. of doing -- taking advantage of its position of strength in one area to gain prominence in another. It's also, in some cases, edging out the little guy.

Netscape was in discussions with start-up Centraal Corp. about using Centraal's Real Name System, another way to do away with URLs and simplify searches. But Homer said Netscape opted to go its own way.

Centraal CEO Keith Teare said in March he hoped to get browser makers to add support for the Real Name System to their browsers. But Friday, he said Netscape's move was good news for his company. "It's very good from our point of view," Teare said. "It focuses attention on something we're trying to achieve."

But while one start-up lost out, another got a potentially lucrative deal.

Netscape is adding the smart browsing feature by licensing software from Alexa Internet, a San Francisco start-up that has archived much of the Web over several years and has mined the data to spot usage trends and provide smart links. By watching where previous Web users have gone from a certain site, Alexa has marked paths of previous site visitors that it offers as suggestions to users. These suggestions will be listed when users click on a "What's Related" button.

Alexa's software has been downloadable from its Web site, but through this new relationship, it will be integrated into Netscape's Communicator browser.

Brewster Kahle, president of Alexa Internet, said smaller companies constantly are looking for distribution channels, such as a browser or a portal site.

"As much as I hate the term portal, making alliances with portals is key to our business," Kahle said. "We're looking forward to doing deals with all the other portals."

Last month, Netscape launched the new strategy, in the midst of rising stock prices of search engines and Web guides that had repositioned themselves as portals. The first service Netscape added was free e-mail, through a partnership with USA.net. Earlier this month, Netscape announced that Excite would supply the engine behind Netscape-branded search.

Netscape claims 5 million members of Netcenter after eight months of operation.

Microsoft has yet to launch a competing portal site. The Start page is rumored to launch sometime before the end of the year. Microsoft vice president Jeff Raikes has said that Microsoft has no plans to turn Microsoft.com into a portal.

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JUNE

JUNE



Robert Seidman's  
**ONLINE  
INSIDER**

# Current Issue

Seidman's Online Insider - June 21, 1998

*Vol. 5, Issue 21*

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Dow Jones  
Business  
Directory **SELECT  
SITE**

## Author's Note

This is an "off-week" edition of the newsletter. A lot happened last week so I'll try to get more in-depth coverage in the next "regular" edition. Unfortunately, due to some scheduling conflicts there will be no newsletter next week. Also, as always, the off-week editions lack the stellar services of my copy-editor, Bernadette Barone.

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## E-Commerce Report Update

Pleased. That's the word I'd use to describe how I feel about our early sales results of Good Reports' first report, "In Search of E-Commerce". I'm really pleased with how the report is selling and with the feedback we're getting. Mark Hurst and I are certainly learning a lot. But, while we are pleased, we'd much rather be ecstatic (though we're definitely happy that we're "pleased" and not "bummed out"!).

We think the report is useful to a broad range of potential buyers, but I think its probably most useful to those directly or indirectly responsible for designing E-Commerce sites. If that's you, please be sure to check

out our web site at: < <http://www.goodreports.com> > for more info. Readers of the newsletter save \$100 over the retail price by using the discount code: Seidman.

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## Microsoft's Start

Microsoft announced a public beta (which now seems to have gone live) of their [home.microsoft.com](http://home.microsoft.com) page that is dubbed "Internet Start". This led some of the press to believe that what we're seeing here is the same thing we'll see when Microsoft launches its "portal" service that is code-named "start". In truth, this beta is just an extension of what was already available at [home.microsoft.com](http://home.microsoft.com). The update was simply to improve the site's performance -- making it roughly 50 percent faster, according to Microsoft Vice President Laura Jennings.

I spoke with both Jennings and product manager Ed Graczyk about the update. While what you see shouldn't be construed as Microsoft's ultimate portal site, I didn't get the feeling that the site would change much in terms of design after speaking to Graczyk. Graczyk and Jennings both said that there will be a series of changes to the site between now and the end of the year. None of the changes will be very drastic, but by the end of the year the combined changes will make for a very different site. Jennings said that a redesign would be a part of what happens between now and the end of the year. Jennings seemed more critically outspoken about some of the site's design elements than even I am.

Changes you can expect to see between now and the end of the year are the addition of a Microsoft-branded search engine (via Inktomi technology), more pointing to Microsoft content (Investor, MSNBC, Expedia, Carpoint, etc) as well as the addition of channels. Jennings also said they would be adding features that would allow HotMail users going to "Start" to see whether they had any new mail waiting.

There will be a series of iterative changes between now and the end of the year with [www.msn.com](http://www.msn.com) and [home.microsoft.com](http://home.microsoft.com) ultimately offering the exact same page. MSN "Premier" (subscription) members will get access to additional content (like Slate at no extra cost and the full-blown Investor site at a discount). The HotMail home page will maintain its own separate look and feel for the foreseeable future, though they will use HotMail to drive traffic to other Microsoft content including the Start page. Overtime Jennings said she'd like to see HotMail users gravitate towards accessing their HotMail accounts via the Start page, but for the time being the HotMail home page would not be the "Start" page. I kind of question this move because the truth is, people coming to the HotMail home page to sign-up for or access HotMail accounts will still have to do the same thing (click the icon to sign-up or enter their user ID and password to log in). Since it isn't any more difficult to sign-up or access, with all the traffic to the HotMail site, it's a sure fire way to get the additional content in front of a LOT of people. But for now, Microsoft

seems either worried about alienating HotMail users or concerned over branding. Stay tuned...

An interesting aside -- Jennings said that the site would ultimately have a "buddy list" feature but rather than using presence management technology acquired when Microsoft bought a company called Flash, earlier this year, Microsoft will be developing its own technology for its buddy lists.

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## Disney Buys a Piece of Infoseek

On Thursday, Walt Disney Co. agreed to buy a 43% stake in Web search engine turned "portal" Infoseek. In return, Infoseek gets Disney's stake in Seattle-based web site operator (most notably ESPN's SportZone web site) Starwave, \$70 million in cash and \$139 million for warrants that would give Disney the option to buy a controlling stake.

It's difficult to say who came out on top here -- it seems a pretty good deal for both. Disney gets a piece of Infoseek relatively inexpensively and, as a part of the deal, Infoseek agrees to buy \$165 million in ads from Disney (the ads will run on Disney's web site, its television and radio stations and at its theme parks). This expenditure will likely keep Infoseek from profit for a couple of extra years at least (analysts were predicting prior to this announcement that Infoseek was nearing profitability).

The 43% stake in Infoseek, based on Thursday's stock price put the value at about \$465 million for Disney (this doesn't include the \$165 million Infoseek will pay Disney for promoting the site).

Disney took a 33% interest in Starwave last year for \$100 million. Last month, Disney said it would exercise its option to buy the rest of Starwave. As a stand-alone company, Starwave is valued by the analysts in the \$300-500 million range.

For Infoseek its as if it bought the rights to ESPN SportsZone, ABCNEWS.COM and Starwave's other ventures (though it appears that Infoseek does not have exclusive use of these products and that Starwave doesn't own perpetual rights to produce the products). Though I am a big CBS

Sportsline fan, I think ESPN is still the better web property and currently Sportsline USA has a market-cap (not fully-diluted) of around \$650 million. This isn't a fair comparison though since Disney could take its brands away from Starwave at some point.

For Disney its stake in Infoseek does come pretty cheaply, and the combination of Disney/Infoseek will certainly be good for both companies. Several people wrote that it seems as if Disney said to Infoseek: "you know how to do this better than we do. When we figure it out, we'll buy those warrants and regain control." I agree with the sentiment.

What I question is whether the InfoSeek/Mouse tandem can make up any

real ground vs. AOL, Excite, Yahoo! and even Lycos. In the home market -- the one Disney excels in, Infoseek trails AOL, Yahoo!, Microsoft, Excite, GeoCities, Netscape and Lycos in MediaMetrix Top 15 Web Properties At Home list. InfoSeek doesn't fare much better in ranking in the At Work Top 15 Web Properties list, but it's reach is MUCH better (27% vs. 18.5%). And at least based on the MediaMetrix data, Lycos is way stronger than Infoseek in both markets. I also question how patient Disney will be if Infoseek hasn't moved up the charts much in 6 months to a year.

As of right now, it seems that major content brands don't have as much impact on online traffic as major ONLINE brands. You have to go to the 10th spot in Media Metrix Top 15 (in both the at home and at work categories) before you hit a true content company. Coming in at number 10 in both categories is Disney with a reach of 14.1 and 15% respectively -- WELL less than half the reach of AOL, Yahoo!, and Microsoft. I don't see this trend changing in the next 12 months.

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## Netscape's NetCenter

Netscape launched a public beta of its NetCenter site (that will ultimately become the home page for people visiting [www.netscape.com](http://www.netscape.com)) at:  
< <http://www.netscape.com/beta.html?>>.

This site doesn't seem much different than Yahoo! or Excite, but is still WAY, WAY, WAY better than its current default home page. Especially with all the frenzy over "Portals" (with NBC investing in CNET's Snap! and the Disney/Infoseek and the AT&T/AOL rumor heightening the frenzy) there will be a close eye on Netscape's implementation. According to MediaMetrix, Netscape is slipping a little bit (Netscape was the 3rd most accessed site in the home market in April and dropped to fourth in May and was the second most accessed site from the workplace in April, dropping to 3rd in May). Still, it is one of the most trafficked sites anywhere.

Personalization (My NetCenter) is not yet available in this version of the beta, but for now I give NetCenter a head-start over Microsoft's Start.

Netscape also officially announced version 4.05 of its Communicator software that among other things the main change for most end users will be the features making up what Netscape refers to as "Smart Browsing". The first component called "What's Related" offers Netscape browser users to get a drop down list of sites related to whatever page they're on. This service was developed in a partnership with Alexa Internet. The second component, Internet Keywords goes further than current browser features that for example will take you to Ford's web site if you type "ford" in the URL address bar. With Internet Keywords, the example Netscape uses is that you can now type "Ford Ranger" and go directly to Ford's page that's devoted to the Ranger line. As previously reported, this feature will first look at a database of about 10,000 names, then at

the Internic registry and if it can still find nothing, it will provide results from a standard search of the entire Internet (via Excite). The final element of Smart Browsing is a set of content filtering tools for librarians, parents, or network administrators.

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## More Fun With Numbers

TOP TEN WEB PROPERTIES - Here are the top 10 Web properties ranked by unique audience for the week ending June 13, 1998, as reported by [NetRatings](#) Inc. A property is defined as a consolidation of multiple domains and URLs associated with a property.

Property	Reach	% Page Views from Cache
1. Yahoo!	48.5%	33%
2. AOL.com*	36.17%	36%
3. Netscape	24.83%	35%
4. GeoCities	23.58%	29%
5. The Excite Network	23.41%	28%
6. MSN	23.39%	29%
7. Microsoft	20.97%	26%
8. Infoseek	14.82%	35%
9. Tripod	14.13%	30%
10. Angelfire	11.47%	39%

The interesting statistic here is how many pages are viewed from the cache (by hitting the "back arrow" for example, to load a previously loaded page). I'm not really surprised, especially with the search engines. You figure it often happens where you click on a link, decide it wasn't what you wanted and go back to the list of links. So it isn't really shocking to me that between one-in-four and more than one-in-three pages come from the cache, but if you figure the implications as they pertain to click-through rates on banner ads, things may even worse than they seem when it comes to click-through rates!

Some other interesting data from NetRatings:

### QUICK LOOKS - USAGE STATISTICS

Detailed Statistics on Web Usage  
Week Ending June 13, 1998

Statistics below represent average activity for a Web user.

Usage Category, Statistics	
Page Views Per Week	321
Time Spent Per Week	5: 22: 30
Number of sessions	9
Pages visited per surfing session	36
Time spent during session	35: 56
Duration of a page viewed	01: 00
Banners viewed	118.19
Banners clicked on	1.29

While interesting, the NetRatings sample seems skewed towards heavier users. The data is still interesting even if it is representing the more active user. Either way (active user or not), compared to TV, the Web is still way, way behind.

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## Final Note

Yes, I know some of you will be in withdrawal because there was so little mention of AOL in this issue. What with the AT&T rumor you probably figured I'd have written a few thousand words on it, but, nah.

So here's a little nugget (just a small one) to get you through until next time. AOL is conducting a closed-beta for a service it is calling My News. Basically this is a web-based service very similar to MyYahoo!, MyExcite and coming soon, MyNetCenter.

I've often chided AOL for not making more out of its "welcome" screen for the proprietary service. But AOL's My News may bridge the gap offering a one-click-away destination for a very personalized and customizable page. Further, especially if integrated with AOL's AOL e-mail via the web service (also in beta) it will offer AOL users their AOL away from AOL (get your AOL anywhere you can access the Web). Like AOL's Instant Messenger service, My News looks like it will also be available to those who aren't subscribers of the proprietary AOL service.

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## Stock Watch for the Week Ended June 19, 1998

You can find a full HTML version of the Stock Watch [here](#).

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JUNE 29, 1998



Bacon's

## BOOT CAMP HAMPTON ROADS

## UPGRADE MANIA. I'm flabbergasted

Despite the obvious shortcomings of the product, hostility toward the company, Microsoft's own admission that this is a minor launch and the inordinately high price, people still lined up at midnight Wednesday to buy the Windows 98 upgrade. I can understand retailers making a big deal of it, and mainstream media covering it because of the Justice Department controversy, but, let's face it, Windows 98 is a patch. Except for a couple of gee-whiz features like the television viewer and online upgrade — the road to more patches — Windows 98 is nothing but three years of bug fixes to Windows 95 with the (free) Internet Explorer 4.01 and Active Desktop tacked on. Yes, the Active Desktop. I don't know one person who wants to hit "back" or "forward" to get through hard drive directories, but I know plenty who don't appreciate the proprietary channels, the way Active Desktop bogs down the CPU



D Ian Hopper

or how it just assumes we all have a constant Internet connection — everyone in Redmond, Wash., has a T1 line flowing out of their backyard, don't you?

I understand that eventually we'll all use 98. It's not just the irrational desire for the latest and greatest, but the new operating system does — theoretically — support the Universal Serial Bus cable. Hopefully, all peripherals will move to

that standard in time, recalling those wacky Alan 8-bit and Commodore dosy-chaining days of yore. But right now, I can count the number of USB peripherals in stores on one hand.

So what do you think? Did you pay almost \$100 for Windows 98 already, or will you soon? Tell me why at [drop.per@dailynews.com](mailto:drop.per@dailynews.com), and I'll print some of your responses next week.

**TIP:** A bug in Microsoft Word has given a wicked new twist to the term "drag and drop." Although Microsoft has given Windows many of the drag-and-drop conveniences that once were the hallmark of the Mac, they still have a few wrinkles to iron out in Redmond. In Windows, for instance, you can print a file by dragging the file icon to the printer icon in Windows Explorer, or by right-clicking the file icon and clicking Print. Careful if you try this in Word for Windows 95 or Word 7.x, though. Microsoft

has acknowledged a bug that can cause users to lose all unsaved data. Until Microsoft releases a code fix for Word, the easiest way to avoid this problem is to be sure to save your work before printing by dragging icons, or don't print this way at all.

**LINE MINDS.** There are many great sites on the Internet, but very few are publicized enough to be popular. A little-known site, [Alexa \(www.alexa.com\)](http://www.alexa.com) is a free navigation service that analyzes Internet browsing patterns and recommends other sites you may be interested in. Alexa works with your browser, sitting in a toolbar on your desktop, and supplies serendipitous surfing suggestions.





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Week of June 9 through 15, 1998

## The World Wide Web Never Forgets

*The Net's awesome memory raises troubling privacy issues.*

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**Story by J.D. Lasica**

From AJR, June 1998

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### GIGABYTES HAVE BEEN WRITTEN ABOUT

**THE** digital revolution, but little attention has been paid to one of its most potentially profound social changes: The Internet doesn't forget. Memories fade, but electronic archives are turning fleeting snapshots of our past lives into permanent records that may follow us forever.

And that has enormous consequences for us as communicators, journalists and citizens.

The common perception is that the Web is a fragile creature filled with dead links, "404 Not Found" error messages, hasty e-mails and other transient digital debris. Indeed, leading figures on the Net have bemoaned the wholesale loss of the Web's early years, such as many of the political sites devoted to the '96 election.

But efforts are underway to change all that. Brewster Kahle of San Francisco, inventor of several Internet search engines, is trying to collect, store and catalog the entire World Wide Web and all 33,000 Usenet newsgroups. Kahle's nonprofit Internet Archive and more recent Alexa company are out to become the modern equivalent of the Library of Alexandria: the repository of all the world's public digital information. To date he's copied and stored some 8 trillion bytes of words, images and sounds (compared to 20 trillion in the Library of Congress).

"If we don't organize the Internet, people will tune out all the noise and they'll settle for calling up 10 channels, and we'll just have television on

J.D. Lasica is the copy desk chief for San Francisco Sidewalk, Microsoft's online city guide. For 20 years prior to that, he was a reporter and editor for three daily newspapers. [jd@well.com](mailto:jd@well.com)

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From AJR,  
June 1998

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the Net," he says. Kahle (who has cooperated with publishers to iron out copyright issues) and others seeking to organize and preserve the Net deserve high praise for making its riches more accessible. But we all need to raise our awareness of how such efforts are also shrinking the sphere of personal privacy.

Consider three areas:

**Hiring:** Applying for a new job? There's a fair chance your prospective employer will use a search engine to scout out your online writings, from prosaic travel pieces to hot-tempered postings to a political newsgroup. In a recent discussion on the online-news listserv, a mailing list of more than 1,000 news professionals, several employers--including an editor at the San Francisco Examiner--said they routinely scour the Net to gauge the habits and personalities of job candidates.

That drew an impassioned rebuke from Marie Coady, a freelance writer in Woburn, Massachusetts, who was unaware that her postings to the group had been cataloged for all the world to see. "When I typed my name into a search engine and found everything I've ever written online, it was a little like coming home and finding someone had gone through my personal belongings," she says. "I felt violated and helpless."

Like it or not, such online sleuthing is here to stay. Used judiciously, the Net's search capabilities offer a valuable tool for cutting through the spin of a resumé and selective clips, ultimately providing a fuller picture of a job candidate's qualifications. But employers tread into unethical waters if they begin probing someone's political or religious beliefs, sexual orientation, attitudes toward unions or quirky personal hobbies. My fear is that even the most fair-minded managers will have their judgment colored.

**Background checks:** Until now, journalists have generally respected the private lives of ordinary citizens. Will the new culture of information saturation--where personal lives become public fodder--reshape our journalistic values? When we write about an interview subject, how deeply should we probe the foibles, mistakes and

indiscretions of a prominent attorney, pastor, civil servant or teacher?

And what of politicians--do we hold candidates for public office up to a more exacting standard of private conduct? Kahle muses, "It's likely that the president we elect 30 years from now already has a Web page up, posted from his college dorm, and future journalists and pundits will have a field day poring over his college-age musings." Will we be able to resist?

**Digital footprints:** Anyone who communicates on the Net, including journalists, should be aware that he or she may be leaving permanent digital footprints, available not only to potential employers but to neighbors, strangers, landlords, rivals, enemies, future lovers, descendants not yet born.

This can be both blessing and curse. For many of us, it would be marvelous for our grandkids to summon up Grandpap's very first home page. For others, whose online forays may not be the stuff of posterity, a gentle forgetfulness would be far kinder.

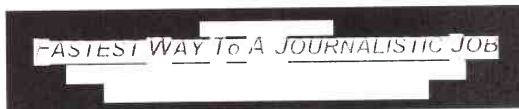
But that may no longer be possible. The digital attic has begun collecting and storing bits and pieces of our lives. There will be no yard sales, no chance to toss out the useless clutter. The Net has forgotten how to forget.

**RETURN**

[Main menu](#)

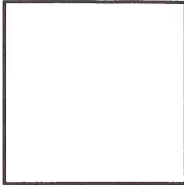
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#### Andover.Net

AndoverNews  
 Animated Banner Maker  
 Cartoon of the Day  
 Dave Central  
 FreeCode  
 Internet Traffic Report  
 MediaBuilder  
 SlaughterHouse

Visit our Sister Site  
[StreetTech.Com](http://StreetTech.Com)

#### Keyword Search

Run Search

#### Month

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1996

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#### Backpointers

Alexa

Version: 1

Show the world the links into your site!

Remember when having a "hit-counter" on your Web site was considered, like, really cool? Remember all those services that sprung up offering a free counter if you'd just put up with a small ad? All of a sudden everyone who came to your site could see how dang popular you were, even if most of those hits were made by you reloading your own page over and over again. Cool, huh?

But as most cool things go, having a counter on your page now marks you as a great big newbie dork. And that's not such a bad thing as far as we're concerned. If you were one of the lucky ones, your counter showed the world how popular you were. However, we'd best that most of y'all out there with counters never broke 1000. Besides, what did those counters ever tell you anyway? Not much beyond a useless number that cluttered up the page, right?

So counters are out. But now we've got something better, something that's a much better indicator of how dang cool you are. Something that you can't fake, can't doctor, or can't even influence a heck of a lot. A site statistic that's really cool and is sure (granted it's big enough) to impress your friends -- backpointers.

Backpointers are links back into your site from other Web pages. Generally, if you're a popular site, you've got lots of backpointers because people want to point their friends and readers to your site. Now we don't want to brag, but Cool Tool's got over 2200 backpointers to it...not too shabby and a

June  
May  
April

---

## Platform

MacOS  
MacPPC  
Windows 3.x  
Windows 95/NT

---

## Category

Audio  
Browser Utilities  
Browsers  
Conferencing  
Connectivity  
Database Tools  
Email  
File Utilities  
FTP  
Games  
Graphics  
Internet Suite  
Java  
Misc.  
Multimedia  
Newsgroups  
Programming  
Push Media  
Real Time Info  
Security  
Servers  
Telnet  
Utilities  
Video  
VRML  
Web Authoring  
Web Site Promotion Tools  
Web Surfing

---

Tool's got over 2200 backpointers to it...not too shabby and a number we don't mind telling you about. And now you can tell your visitors how many backpointers your site's got just by using a simple button from Alexa.

Just pop some simple code into your homepage and you're set. Every month, Alexa will refresh your backpointer button with the new number of backpointers to your site. As your popularity grows, so will your backpointers, a fact so elegantly displayed on your site by the Alexa Backpointer button. User clicking on your button even get a list of the pointers to your site...as sure way to show 'em that you're not just whistlin' dixie.

So go check it out. It's fast, free, and no salesman will call. You're under no obligation to the nice folks at Alexa and you're free to remove the button at any time for a full refund of your null purchase price. What a deal! Better get hoppin!

ps. And please...put a link to Cool Tool on your site...we're countin' on you. Literally.

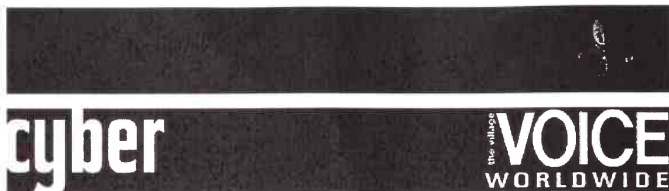
### Home Page

<http://www.backpointer.com/join.html>

### Previous Cool Tool

### JOIN the Andover Update mailing list

Enter your email address, then click Subscribe



## Machine Age

by Austin Bunn



Talk back!  
[editor@villagevoice.com](mailto:editor@villagevoice.com)

**PAZZ & JOP  
 CRITICS' POLL**

What won't they  
 take the funk out of  
 next?



**Taking in the Trash** When historians finally get around to tackling the Net, the Net will likely tackle them. The source material is already so suffused with static--abandoned home pages, XXX spam, and countless messages that venture, "Testing . . . Are you there?"--that the human signal may be impossible to pick out from the noise. And the volume is only getting louder. The three-year-old WWAC list ([www.wac.org](http://www.wac.org)), a 3000-person e-mail congress of mostly New York designers and entrepreneurs, is reaching the tipping point with its archives on servers at Echo. Query the archives through e-mail and you can easily read the handful of initial posts ("Hello, there . . . the few, the proud" and "Hi. I've got the chips, who brought the dip?") from January 1995. But try to read May 1998's file and Echo's software can't deal with it, says list administrator Larry Aronson. "The file is just too enormous."

If we can save everything, then should we? Artist Mark Napier's idea is to decide what's junk and start dumping--not trash the files exactly, but make a public spectacle of them, a tea party of ephemera. Last week, Napier unveiled his virtual compost heap, called the "Digital Landfill" ([potatoland.org/landfill](http://potatoland.org/landfill)), where users can deposit graphics, text, and animations into a roiling stack of castoffs. The site layers the donations on top of one another, so what you get is, not surprisingly, an absolute mess. But, as he notes, our ruins reveal as much about us as our monuments. "The landfill is not supposed to have value," he says. "It creates a view of the subconscious of the Web culture."

Some bits are a little more conscious than others. Last fall, Napier drew the ire of the toy company Mattel for his twisted online culture jam "The Distorted Barbie," where he digitally mutated the plastic bombshell ([interport.net/napier/barbie](http://interport.net/napier/barbie)). Napier added the

"cease and desist" letter he received from Mattel to the landfill. "I made the digital landfill so that I had a place to throw that letter," he admits. With the landfill, he wants to raise questions about the future of digital objects that don't decay. "In 20 years, will we be collecting digital antiques?" he asks.

The navigation tool Alexa ([alexa.com](http://alexa.com)) already is. Developed by the people behind the Internet Archive ([archive.org](http://archive.org))--the Library of Congress of the Net--Alexa runs below the browser and provides information about the Web page that you're looking at: who owns it, where most users go to from it, and, if the page is missing, what it used to look like. If you encounter a "404 File Not Found" on a site, Alexa searches through its database of 500,000 Web sites to fill the hole with an archival version. "As a navigation feature, it seems like, why use this? Why is this here?" says Alexa CEO and president Brewster Kahle. "But the 404 service has been very useful to a few people, like those who lose pages on their own servers if they crash."

Effectively, it's a form of public salvage: to Alexa, nothing is junk--just unpopular. Alexa blindly stores everything on the Net onto tapes, now containing over 10 terabytes of data--over half the amount in the Library of Congress, says Kahle. But its 100,000 active users are pruning the data through their collective paths, which other users can follow. One Alexa stat shows that just 1000 sites account for half of the traffic on the Web. "The Web made everyone into a publisher, and Alexa makes everyone into an editor," Kahle says.

Even with all the evident chaff that remains, Kahle still believes wholeheartedly in broad preservation. "We want a feel of what the whole Net looks like," he says. But he recognizes that Alexa's storage system works for now because most of the data online is text. As he says, "[storage] starts to become a real issue of volume when everybody has a camcorder pointed at their kid's cradle."

### **Federalist Papers 2.0**

The question was like trying to sluice a tidal wave: where do you draw the line and declaim, "Government begins here"? At last week's all-star panel, "The Internet & Public



Policy: Who's in Control?" Harvard Law professor and panelist Lawrence Lessig nailed the recalcitrant spirit of Netizens. "We don't have a problem with governance in cyberspace," said the rhetorically polished Lessig. "We have a problem with governance."

The three participants in the discussion, sponsored by the New York New Media Association, would be the inaugural members of the Net's constitutional convention if one ever were convened: Lessig (who also serves as "special master" in the Microsoft antitrust case), Ira Magaziner (a presidential senior adviser and framer of the latest domain name policy), and Esther Dyson (venture capitalist and author of *Release 2.0*). They are possibly the only people capable of wrestling with the policy debate coherently--or, as they proved last week, at least able to properly frame the question.

The Net is exploding with ad hoc, private-industry governments, young colonies without state lines. With the rise of alternative ruling bodies to arbitrate the privacy and censorware debates--"private architectures" as Lessig terms them--"to call the government 'it' " is a mistake, Dyson said. But smaller efforts at regulation, like the nonprofit data-control service TRUSTe (which Dyson helped instigate), face the challenge of "legitimacy," said Magaziner.

The government white paper on domain names policy, ([www.ntia.doc.gov/ntiahome/domainname/6\\_5\\_98dns.htm](http://www.ntia.doc.gov/ntiahome/domainname/6_5_98dns.htm)), released on June 5 and debated by the panel, will face its own questions of legitimacy. The initiative calls for a nonprofit organization, consisting of "stakeholders" from all interested companies, to rule over the meting out of the top-level domains like ".com" and ".net," wresting control away from the corporation Network Solutions, which currently manages the system. While Lessig agrees with the new system in theory, he argued that the problem is that we don't know who the "stakeholders" are, and that in many debates (like that over encryption) we are all stakeholders.

And that's the issue that haunts us: as the Net comes closer to being regulated by specific bodies, who is choosing them? Just what constitutes citizenship, exactly, and when do we get to vote? The migration toward



overarching ruling groups--like the domain name nonprofit--signals a trend away from consensus and public debate, warned Lessig. "We're not democrats anymore, but that should force us to figure out why."

### Signal and Noise

Agencies: David Remnick nabbed \$200,000 for *Lenin's Tomb*. Joe Klein got his own \$200K for *Primary Colors*. For those bucking to get published, the Agent Research & Evaluation site ([www.agentresearch.com](http://www.agentresearch.com)), created by Bill Martin and his wife, author Beverly Byrne, is intended to "empower authors" with an extensive database of about 850 literary agents, their deals, and the 10,000 authors they rep. Though essentially a promotional site for a \$30 yearly newsletter, AR&E still offers a telling list of the highest-powered agents behind the bestsellers and an "Agent Verification" function to let writers interrogate the database to ascertain whether their newest suitor is legit. . .

HackJob: First, John Markoff of the *Times* wrote a front-page story on hacker Kevin Mitnick. Next came the book deal for *Takedown*--a collaboration between Markoff and Mitnick's captor Tsutomu Shimomura. Now Miramax is rolling on the *Takedown* film, set to star Skeet Ulrich as Mitnick. But can Skeet type 90 words a minute and glower at the same time? . . .

Secret History: During the "quiet period" before an IPO, executives must keep all company business on the q.t. But now that ad network DoubleClick has become the Alley's first company to spike in the market (trading now at 35 points), president Kevin Ryan will go public with the perks and perils of opening the company up to investment at the MIT Enterprise Forum meeting on June 24, at the Chase Manhattan bank at 270 Park Avenue. Accountants, lawyers, and investment bankers will be on hand. Call 681-1112 for details.

### Previous *Machine Age* features:

- [June 9, 1998 \(Burning Bridges\)](#)
- [June 2, 1998 \(Señor Stereotype\)](#)
- [May 26, 1998 \(Opening Windows\)](#)
- [May 19, 1998 \(Photographic Memory\)](#)
- [May 12, 1998 \(Cyber Activism. ATM\)](#)



# Netscape updates Communicator

**News.COM** TECH  
NEWS  
FIRST

*Paul Festa and Courtney Macavinta*  
**CNET NEWS.COM**  
Netscape Communications today officially announced the latest version of its Internet software suite, Communicator 4.5.

As previously reported by CNET NEWS.COM, Communicator 4.5 introduces both content filtering controls



as well as features that eliminate steps in the Web searching process. Other innovations in Version 4.5 are geared toward corporate users

who need to access their email from different computers.

"The Communicator 4.5 release reflects a general direction of ours in terms of integrating the product with the Internet," said Julie Herendeen, director of marketing client products at Netscape. "We continue to hear from our users that they want easier Web searching and high-performance messaging."

With the Version 4.5 release, the Communicator suite has shrunk by one application because the Collabra software for newsgroup management has been folded into the Messenger software for email management.

Today's announcement precedes a beta release early next month, and a fall shipment of the final product.

Communicator 4.5 has been on a parallel development track with Communicator 5.0, which will be Netscape's first Internet software suite based on the work of [Mozilla.org](http://Mozilla.org).

In an attempt to stop steady hemorrhaging of its Navigator browser's market share to [Microsoft's](http://Microsoft's) Internet Explorer browser, Netscape released its browser's source code to the public, and assigned [Mozilla.org](http://Mozilla.org) the task of guiding the development community's work with that

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code. At that time, Netscape also made the product free of charge.

Developers working with Mozilla.org have been analyzing source code for 4.5 improvements as Netscape has passed them on, but the 4.5 release does not incorporate any Mozilla.org work, according to Netscape.

Netscape is categorizing features new to Communicator 4.5 under two main headings: Smart Browsing and Flexible Roaming Access.

Smart Browsing itself comprises three features. The first of these, called "What's Related," provides visitors to many Web sites with a drop-down box containing an automatically generated list of recommended related sites. Developed in a partnership with Alexa Internet, the feature relies on the servers of Netscape's Netcenter portal site for a database of links that are automatically updated through software that tracks and analyzes people's Web use.

The What's Related function does not discriminate on the basis of content, according to Smart Browsing program manager Ken Hickman, and will provide recommended links for controversial Web sites such as pornography and hate speech sites.

The second Smart Browsing feature, called "Internet Keywords," lets users type search keywords directly into the browser's URL address field.

Users of both Netscape's and Microsoft's current browsers will recognize this feature; those browsers already can read keywords typed into the browser and bring up a page of search results--from Netcenter in Netscape's case, and from Yahoo in Microsoft's.

But Communicator 4.5 goes beyond the current browsers' keyword capabilities by tapping into a database of trademarked and product names. In Netscape's example, typing "Ford Ranger" into the URL field of Navigator 4.5 would take the user directly to Ford Motor Company's page devoted to the Ranger, for example.

More ambiguous terms like "United"--which could refer to United Airlines, United Van Lines, and numerous other firms--eventually will lead to a list of possible matches once the databases are built out. But until that happens, terms like "United" will share the same destination that keywords typed into Navigator 4.0 browsers have: a search results page from Netcenter.

In another instance of Communicator's increasing integration with Netcenter, keywords that correspond to a Netcenter channel will lead the user to that channel.

The third element of Smart Browsing is called NetWatch, a set of content filtering tools for parents, librarians, or network administrators.

The two Net site screening features integrated into the browser are RSACi and SafeSurf Web site ratings systems.



Microsoft Internet Explorer already

supports both systems, which block access to sites containing adult language, violence, and nudity, for example, based on ratings applied to Web pages by content providers.

Netscape's support is a big boost for Net ratings systems, advocated by some because it gives the user more control but criticized by others who worry that the filters will wind up curtailing free speech.

Communicator 4.5's features for mobile, or "roaming," corporate Netizens include the ability for users to create profiles of their Internet software configurations and access those set-ups from any computer. Other roaming features fall primarily into the Messaging portion of Communicator.

These roaming corporate users are a prime target audience for Netcenter, which gets an unusually high amount of its traffic from people accessing it from work during business hours.

Previous versions of Communicator have supported a type of email following the protocol IMAP, or Internet Message Access Protocol. IMAP is more flexible

than the more common POP-based email. IMAP lets users use the server for tasks previously reserved for the client computer, including the storage and management of email.

New IMAP-related features of Communicator 4.5 will let users specify what attachments they want to download from the server, and will let them search more precisely for documents within email folders. Another feature new to 4.5 will let users share email folders on IMAP servers.

Version 4.5 also will increase the number of options for filtering incoming messages, and also will widen the range of management capabilities enabled during offline sessions.

Other new features of Communicator 4.5's are based on the Lightweight Directory Access Protocol, or LDAP. Like IMAP, LDAP was supported in previous versions of Communicator, but version 4.5 will go beyond basic support by expanding the capabilities of the Messenger address book.

In one instance, Communicator 4.5 will let users look up an employee's name in a corporate directory, and if several names come up, the client address book can then access the corporate directory for more identifying information such as job title or department.

Communicator 4.5 will also let users replicate LDAP directories for offline sessions, and will automate synchronization between server and client files when the user logs in again to the network.

Another modification to Version 4.5 is a revised calendar. With Communicator 4.5, the calendar interface will more closely resemble that of the email program. Hovering over calendar dates will produce explanatory notes, known as "tooltips," summarizing information such as the time and date of the meeting. Version 4.5 also lets users drag and drop meetings from one time to another, and it notifies users automatically of conflicts as they are scheduled.



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## Netscape to update Communicator

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By Paul Festa and Courtney Macavinta

Staff Writers, CNET NEWS.COM

June 15, 1998, 1:55 p.m. PT

Netscape Communications will announce the latest version of its Communicator Internet software Wednesday, according to sources familiar with the release.

Communicator 4.5 will include features that Netscape has already announced, such as its "Smart Browsing" technology that links the Web browser more closely with its Netcenter portal site. Other browser enhancements include features that will make it easier for users to "roam," or share computers between home, work, and elsewhere through automatic personal configurations.

Netscape declined to comment on Wednesday's announcement.

Netscape's Smart Browsing initiative includes a number of ways to help users, particularly neophytes, find what they are looking for on the Web.

The first of these new search methods, called "Internet Keywords," essentially lets users skip a step in the search process by typing keywords directly into the browser location bar rather than into a separate search

box. While it may seem a minor improvement, analysts praise the keyword function as a helpful tool for the vast market of those making their first steps onto the Net.

"Any time you eliminate a mode or a step in the search process, you have greatly simplified the process for the masses," said Vernon Keenan, analyst with [Zona Research](#).

Internet Keywords also will help Netscape point browser users toward its Netcenter portal site. When a user types in a keyword that is very

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When a user types in a keyword that is very broad in scope, such as "cars," the browser will go to Netcenter's channel on that topic.

Another Smart Browsing function featured in Communicator 4.5 is button called "What's Related" that functions something like an automatically generated list of recommended related links. Netscape has developed this feature in conjunction with [Alexa Internet](#), which gathers the "What's Related" links for individual Web pages.

A third Smart Browsing feature included in Communicator 4.5 is NetWatch, a set of tools to filter out online sites based on a user's settings.

The two Net site screening features integrated into the browser are [RSACi](#) and [SafeSurf](#) Web site ratings systems. [Microsoft](#) Internet Explorer already supports both systems, which block access to sites containing adult language, violence, and nudity, for example, based on ratings applied to Web pages by content providers.

Netscape's support is a [big boost](#) for Net ratings systems, which have been slow to catch on with Web sites and users because of criticism from free-speech advocates.

In addition to the Smart Browsing features targeted at newer Internet users, Communicator 4.5 also will include improvements for business customers and for those who toggle back and forth between home and work computers. These types of users are a main focus of the company's Netcenter portal site.

One of the business improvements includes beefed up support for Lightweight Directory Access Protocol ([LDAP](#)). Previous versions of Communicator have supported LDAP, but the implementation in version 4.5 will be tied to the client address book.

This will let users look up an employee's name in a corporate directory, for example, and if several names come up, the client address book can then access the corporate directory for more information such as job title or department.

In addition to corporations with extensive intranets, Internet service providers also could provide these kinds of address book and directory services to users with Communicator 4.5, but comparatively few ISPs currently run

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LDAP directories.

Communicator 4.5 also will feature improved support for Internet Message Access Protocol (IMAP). IMAP is an email protocol that lets users do more than they can with standard POP-based email.

The protocol allows the server to be used for tasks previously reserved for the user's computer, including the storage and management of email. IMAP also lets users share folders on the server.

Analysts praised the direction of the new browser for both the improvements aimed at neophytes and those aimed at corporate users.

"Netscape is aligning the browser more and more with Netcenter," said Paul Hagen of Forrester Research. Noting that Internet companies such as Microsoft and America Online are using their browsers in similar ways, Hagen said, "I find it sort of fascinating that there's a piece of software that aligns with a media property."

Current versions of Communicator only provide links to Netcenter. Version 4.5 will integrate features of the portal with those of the browser to achieve "cross-pollination."

This integration, according to Hagen and others, could give Netscape an important boost in its battle with Yahoo and Excite to become the leading Internet portal site.

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## Technology News

# Netscape To Release Communicator 4.5 Beta

(06/17/98; 1:27 p.m. ET)

By [Malcolm MacLachlan](#), [TechWeb](#)

Just because browsers are free, the browser war isn't over. Netscape announced the latest version of Communicator Wednesday, with a number of new features for better searching and communications.

Communicator 4.5 will also try to send traffic to an area of Netscape's ([company profile](#)) business that is increasingly contributing to the bottom line: its Netcenter website.

The new client will go into beta early next month, with a full release expected by the fall. The most touted new features center around "smart browsing." Users may now enter search terms directly into the browser location bar. If the user types in a generic term such as *cars* or *computers*, Communicator brings up a link to the corresponding area of the Netcenter site. There, users will find news, consumer information, and services related to the search term.

The browser will also do an Internet key-words search to bring the user to the site he/she is looking for. For instance, typing in *White House* will bring up [whitehouse.gov](#), the president's official site, rather than [whitehouse.com](#), a pornography site that has capitalized on the small differences between domain names.

The key-words feature relies on a growing database of hundreds of thousands of sites. The idea is similar to that introduced in March by a company called Centraal with its Real Names system. Centraal signed a [deal](#) with AltaVista last month, whereby the search engine pulls up sites from Centraal's database. Unlike Netscape, Centraal charges \$50 for inclusion in its database.

Another "smart" feature is the new What's Related? button, which relies on a database of links from Alexa Internet. A search for the term *cars*, for instance, would bring up auto-maker sites and *Consumer Reports* magazine. As with the

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*Consumer Reports* magazine. As with the key-words feature, companies are not paying to be included in the database.

"We're interested in making sure the feature works well for users," said Edith Gong, group product manager for the Communicator division. "Right now, there's no money being exchanged."

In an effort to appeal to home users, especially parents, Netscape has added NetWatch, a set of tools for filtering sites. This essentially gives parents the same power to filter sites that corporate IT managers already have with Netscape's Mission Control Console, Gong said. NetWatch uses the SafeSurf and RSACi Web-ratings systems.

**"Users are much more mobile. They're needing to gain access to their messaging and their user environment from a number of different places."**

-- Julie Herendeen  
Netscape

Netscape has also added a number of new features to e-mail, which is now based on Internet Message Access Protocol, or IMAP. This lets users use boolean searches across multiple folders and address books, both private and shared company directories. It has added easier user-configured spam filtering. Users use a drag-and-drop interface to embed links in e-mail, add

colleagues to shared directories, and mail entire folders.

The 4.5 version will also have increased roaming access features for using the same e-mail, messaging, and user environment at work, home, or while on the road.

"Users are much more mobile," said Julie Herendeen, director of marketing for the client-products division at Netscape, in Mountain View, Calif. "They're needing to gain access to their messaging and their user environment from a number of different places."

Herendeen said Netscape's browser share has stabilized at about 60 percent since the company began giving away the browser in January, as measured by analysis companies such as Dataquest and International Data, as well as Netscape's own research. Although the company no longer gains revenue on the browser, it is the most important source of traffic to Netcenter. Netscape will roll out the latest version of its Internet gateway site, Netcenter 2.0, by the end of this month.

Maintaining a strong browser presence will become

increasingly important as Redmond, Wash.-based Microsoft ([company profile](#)) works to integrate Internet Explorer with the Windows 98 operating system as part of its strategy to drive its own gateway site, Start.

Communicator 4.5 does not utilize development from the free source-code community. In the 5.0 version of Communicator, due out next year, Netscape will include code and features contributed by partners in the [N](#)

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*By Kevin Savetz*

## Alexa, I'm Glad I Met Ya...

### A Web Browser Add-On That Makes Surfing Sweeter

I'm not a big fan of software add-ons. Most browser add-ons, plug-ins and other doodads manage to overwhelm me with their utility while nibbling away at the stability of my computer system. In my book, a lot of those gadgets just aren't worth the trouble.

I've made an exception, though, for a program called Alexa--an add-on that makes surfing the Web faster, easier, and more informative.

After you download and install Alexa, you'll find a toolbar alongside your Web browser's window. When you visit a site, Alexa goes to work, displaying relevant information in its toolbar. The toolbar provides two primary kinds of information--about the site, and about other sites on the same topic.

When you visit a Web site, Alexa will tell you who owns the site and about its popularity. (CompuServe's site is in the "Top 10,000" according to Alexa, Yahoo is in the "Top 10," and little Podunk sites like mine and yours are humanely labelled "Moderate traffic.") Clicking on the arrow icon next to these stats reveals more information, including the number of links to the site from elsewhere, the number of pages that comprise the site, its speed and how often it is updated.

Just to the left on the toolbar is the feature that makes Alexa truly useful: The related links index. Here, a pop-up menu reveals a list of other sites on topics similar to the current one. For example, while visiting the clip art warehouse ArtToday ([www.arttoday.com](http://www.arttoday.com)), the program recommended a desktop publishing site, a font archive and other clip art sites. Alexa creates this list with a combination of recommendations (the "add a link to this list" command allows you to suggest a site) and by watching the surfing patterns of its users. As a result, Alexa's list of related links usually contains a few questionable choices. (When I'm at the Maytag Appliances Web site, the recommendations of other appliance manufacturers' sites make perfect sense. But I am at a loss to explain why MapQuest, a mapping tool, is recommended as well.)

**When you visit a site, Alexa goes to work, displaying relevant information in its toolbar. The toolbar provides two primary kinds of information--about the site, and about other sites on the same topic.**

Despite these occasional eccentricities, once you've found one site that's what you want--or almost what you're looking for--the related links index makes it easy to find others. It provides the convenience of Excite's "more like this" function, without making you trundle off to a search engine to do it.

Where does that usage pattern data come from? It comes from Alexa users like you. The program works by watching where you go on the Web, and in what order you visit sites. This information is reported to

a central database. That information is completely anonymous, just the surfing pattern of another nameless Web surfer. So you don't have to be embarrassed if you're a regular, closeted, visitor to the Spice Girls Web page.

Alexa can bring pages back from the dead, sort of. A major feature is its ability to access an archive when a page that you want to access is unavailable. When you happen across that all-too-common "404: file not found" message, you can tap the toolbar's Archive button to try to retrieve a stored copy of that page from Alexa's 8-terabyte archive (some 500,000 Web sites). It's a great feature, but don't bother pressing that Archive button unless you really want that information. You may have to wait several minutes while the server loads the page from tape. (You can keep surfing in the meantime--Alexa will inform you when the missing page is available from the archive.)

Back in Alexa's toolbar, you'll also find quick access to an online dictionary and encyclopedia. Oh, and you'll notice a postage-stamp-sized advertisement there as well. (Hey, it's a free program. Learn to live with it.)

Alexa won't force you through the trouble of upgrading every time a better version comes along. Its "auto update" capability means that enhancements will be installed without taking your time or attention. Remind me again why all programs don't have this capability?

For PCs, Alexa requires a 486 or Pentium family processor running Windows 95 or NT. It also requires Netscape Navigator or Microsoft Internet Explorer 3.0 or later--other browsers, such as Opera, won't work with it. On the Mac side, Alexa is still being alpha tested--and is prone to occasional crashes, as alpha versions are wont to be. It requires a PowerPC running MacOS 7.5 or later. You can get more information about Alexa or download the program from [www.alexa.com](http://www.alexa.com).

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APICS

online

## RETROSPECTIVE REDUX

By KENNETH S. MOSER, CNA, CNSA

This month marks the second anniversary of the APICS Web site — actually the site has been operational for a little more than two years, but nobody except newbies celebrates half-month anniversaries. As in years past, this seems like a good time to sit back and review the mail.

Last year at this time, events had just forced APICS to move its entire site to a new service provider, UUNET, where it lives today. At that time, visitors could review the entire site index in about four screens, and the site consisted of less than 300 static Web pages. As a result, it took only two people, working part time, to maintain the site, and I actually knew what each and every page said. On a big month, the site generated little more than 800 e-mail messages, and the biggest complaint was that some areas of the site required visitors to complete a registration screen and log in. Finally, until APICS moved to its new Internet provider, the society never knew how many people were visiting the Web site.

Today, the site hosts over 800 Web pages, three database query services, a document download area, gateways to several other services such as the e-mail discussion lists, and a number of automated scripts. Registration and login are no longer required. On the other hand, the site index has grown to several pages in length, and the site now requires significant care and feeding from well over a dozen assorted staff. To say the least, site growth has been phenomenal.

In fact, as I'm writing this column, the latest statistics available reveal that the site generated 1,829 e-mail requests in March alone. This was a record for APICS but, with a monthly average of 1,700 and 1,500 requests for the previous three and six months respectively, it does not appear to be unusual.

Better yet, UUNET is providing APICS with very detailed statistics on site traffic. For example, in March 1998, the site logged 389,632 hits over 25,108 sessions lasting an average of 11 minutes each. Based on individual page hits, we know that certification is the most popular topic, followed closely by the online catalog and calendar.

Best of all, based on the e-mail, it looks as though the site is serving most users well. The main issues seem to have shifted from technical features to content. Furthermore, no single issue dominates. This is as it should be.

Meanwhile, what have we learned about APICS Web site visitors? Some might recall that APICS used to send out visi-

tor surveys. This is no longer necessary because much of the information APICS needed is now available from site statistics.

For example, while the single favorite Internet Service Provider is America Online, many site visitors come through corporate gateways. In all, 65 percent access APICS from .com domains, 26 percent from .net domains, and six percent from .edu domains. Most of those accessing the Web site live in the United States, Canada, South Korea, the United Kingdom and Japan. Yahoo! and Excite appear to be the most popular search engines, or at least that's how most users are finding APICS, and the favorite keyword is *apics*. On the whole, users tend to visit the site on weekdays from 9 a.m. to 9 p.m. Eastern Standard Time (USA). Last but not least, most users run

Windows 95, and Microsoft Explorer is beginning to edge out Netscape as the browser of choice — but only by a hair.

In addition, more users each month are placing orders with APICS through the Web. While this is great for all the obvious reasons, I want everyone to know that I really appreciate their trust. APICS has taken measures and continues to explore new options available to secure its Web site. APICS also tries very hard to respect users' privacy and

does not publish e-mail addresses or even track individual visits. All of the statistics I quoted above, for example, are based solely on aggregate information.

As I write this, APICS is working to bring a fantastic new look to the site — its first major facelift. In fact, if all goes according to plan, the new look should be in place shortly after publication of this issue of the magazine. To be one of the first to see this new look, I recommend that you subscribe to the WhatsNew service. To do this, send an e-mail message containing the comment, JOIN WHATSNEW, on a line by itself with no other text and no signature block at [admin@lists.apics.org](mailto:admin@lists.apics.org). Users also can join the list by visiting the APICS Web site at <http://www.apics.org/joinlists.htm>.

Meanwhile, following are a few "new" search engines:

- **NetSearcher** — Powered by Lycos, this service is billed as *The Search Engine for Internet Professionals*. This is a real search index, not a subject directory, so users must take care to use specific queries. See <http://netsearcher.com/>
- **Ask Jeeves** — This is a search engine for people who don't want to learn Boolean logic — instead, it lets users type questions in English. For example: "Where can I get info on chiropractors?" See <http://www.askjeeves.com>.

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• **Dogpile** — Dogpile is a meta search engine that sends the query off to Yahoo!, Lycos, Excite, and other popular search engines. The results page is rather nice for engines of this type. See <http://www.dogpile.com>.

• **AlphaSearch** — Hosted by the Calvin Theological Seminary, this site bills itself as *The Gateway to the Academic Web*. Subject matter is organized by academic discipline and resource type, the latter including databases and journals as well as other typical resources. See <http://www.calvin.edu/library/as/>.

**Alexa** — Alexa is not only a search engine, but a small plug-in that allows users to download to work in tandem with the browser. In addition to searches and hints, Alexa provides real-time feedback on each site you visit, with easy access to site statistics and popularity ratings. After I have more time to play with it, I may feature this software in a future article. *Meanwhile, if you try it out, please visit the site and place a vote for us.* See <http://www.alexa.com>.

In closing, as you may know, I gave a presentation on search engines at APICS '97 and am due for a second pass at APICS '98. If you find an interesting search engine or have any interesting stories to tell concerning experiences with them, please e-mail them to me at [k\\_moser@apics-hq.org](mailto:k_moser@apics-hq.org). ♦



# STARS-A TECHNOLOGY

By Kenneth Hein

# TECH.watch

New York, NY

[khein@billcom.com]

<http://www.incentivemag.com>

## Frequently versatile

If you've been trying to follow all of the new frequent-flyer-type loyalty programs on the Net, you're probably pretty confused. One reward program awards users for reading an online ad, another for sending in UPC codes for off-line purchases, another for making a purchase on the Web and yet another for reading ad-driven E-mails. While these are all worthy and viable

MyPoints is basically the online equivalent to the back-end of loyalty programs. It takes care of the collection and redemption process. "We're the bank for them and an E-mail post office. This way companies don't have to put together a whole infrastructure to put together a points program or hire an incentive house to do it," says Craig Muller, president of Schaumburg, Ill.-based MotivationNet, creator of MyPoints.

Companies that have taken advantage of the ease in which MyPoints can be worked into a program include Hanes, Spiegel and Alexa. "We're using MyPoints to bring traffic to the site by rewarding users for clicking on our banner," says Cindy Sutton, spokeswoman for One Hanes Place—<http://www.onehanesplace.com>. "Initially we ran our banners in a number of different places. Now we can narrow it down to the locations that are most effective."

Points can be redeemed for packages with Carnival Cruises, Marriott Hotels & Resorts or for tickets on virtually any airline. Barnes and Noble, Olive Garden, Red Lobster, Marshall's and TJ Maxx have also just been announced as redemption options.

Muller admits that his company has "well-respected competitors in each online frequency program niche, however we are the only product that allows marketers to control their own program," he says. "If they want to give out 50 points for clicking on a banner, fine. Give them 100 points for buying their product, that's O.K. Or if they want to reward dealers globally for putting

programs, one company claims its product can be used not only for any of these programs, but also for employee motivation programs. This product is the MyPoints Universal Rewards Currency (<http://www.mypoints.com>).

Launched in December of last year,

### TECHNOTE

**HITS OR MISSES** How many users are really looking at your Web site? At this point, there are no accurate means of measurement. Errors in the measuring of hits to a site, based on Internet provider access, averaged as much as 25 percent, according to a recent study conducted by the University of Southern California. This means if you've tabulated 1,000 hits for the month, you could actually have had as many as 1,250 hits or as few as 750.



### WEB SITE OF THE MONTH aim your browser toward

<http://www.promotion-clinic.ppa.org>

Is there a doctor in the house for on the Web for that matter? If your promotional strategy is ailing the sickly—you're flailing for an idea for your promotions—need to find the right speaker for a speaking engagement, or are looking for a new premium distributor—then visit the clinic. The Irving, Texas-based Promotional Products Association International has created the Promotion Clinic to satisfy the unmet needs of your promotional programs.

Users can just click on "Diagnose" to receive a number of case studies detailing the details of successful campaigns. "Referrals" provides a list of preferred speakers and "Hence Clinic" lists a number of premium distributors. Other options include the "Emergency Room," which provides a working medicine in the form of pre-approved, and the "Promotion Clinic Library" which provides a number of resources to help you learn more about promotional products and programs.

orders online, we can do that too."

According to Hutton, Hanes not only likes the program's flexibility, but also a few other things. "They have a lot of financial backing, state of the art tracking tools and they're blasting the MyPoints name out there, which should attract a lot of eyeballs."



JUNE 1, 1998



**Bacon's**

## UPDATE<sup>3455 A</sup> Netscape Unveils An Array of New Features For Its Netcenter Hub Site

By Whit Andrews

**I**T IS TELLING that Netscape, in describing what a year ago would have been called browser features, announced last week what it said are new features of its

destination site, Netcenter [See "Netscape's Netcenter Faces Battle To Retain Its Status as a Top Site," March 16].

Not all the changes that are expected to be in Netcenter soon will be browser-driven. In particular, Netscape's new personalization technology—which will serve users of e-mail accounts, forum identities, and personal news pages—will be almost purely site-related.

But major changes described for Netcenter include:

- A browser component that will aid surfers in finding sites similar to any they are visiting, using technology and an index licensed from agent startup **Alexa** (and returning the resulting Clickstream database to Alexa for its use).
- A component update service that will notify users of updates to Netscape software and components made to work with it, in an effort to streamline the process

of getting plug-ins.

- A search-from-the-toolbar option that harks back to an initial appear-



Many of the new features are browser-related, although Netscape is marketing them as components of Netcenter.

ance in a beta build of Netscape 2.0 in late 1995. In this incarnation, the search box will seek keywords first in the InterNIC site database, then in a trademark database, then via enhanced Excite search, and then via a Net Search partner.

"I think one of the things we've found in user testing is that new users have trouble determining the difference between the location bar and a search box," said Jennifer Bailey, vice president of marketing for Netcenter. The feature seeks to erase the confusion by combining the two.

The simplified search and sites-like-this features will benefit Netcenter by recommending its channels and features in which surfers might be interested, Bailey said. The features will be introduced in an incremental update of Navigator scheduled for this summer.

search: BROWERS



## THE SEARCH ENGINE UPDATE

### June 3, 1998 - Number 30

By Danny Sullivan  
Editor, Search Engine Watch  
<http://searchenginewatch.com/>

#### About The Update

The Search Engine Update is a twice-monthly update of search engine news. It is available only to those people who have subscribed to Search Engine Watch, <http://searchenginewatch.com/>.

Please note that long URLs may break into two lines in some mail readers. Cut and paste, should this occur.

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- + [AltaVista Launches New Look, Larger Size, More Languages](#)
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#### General Notes

Hello Everyone--

Once again, it's been another busy month in the world of search engines. Covering all the latest news has put me behind on some site updates I'd planned for May, but I'll be moving quickly to do these over the next two weeks.

First on the list will be a revised "What People Search For" page, with a number of new links. The folks at MetaCrawler, <http://www.metacrawler.com/>, are now also providing me with top terms each month. There will be a new page within the site summarizing these.

Also, I am just about to post revised Search Engine EKG charts that show crawling patterns.

The easiest way to keep informed about these and other pages will be to check the site's What's New page, where I will post notice of revisions and new additions.

**Search Engine Watch What's New**  
<http://searchenginewatch.com/whatsnew.html>

#### Search Engine News

##### New Netscape Line-Up

Netscape has unveiled the most sweeping changes to its important Net Search page since it established its landmark pay-for-placement deals on the page in April 1996.

Most significant is that Netscape is now running its own, branded search engine, Netscape Search. It's powered by Excite, in the same way that Excite provides results for the AOL NetFind search engine.

Netscape now occupies one of the coveted "Premier Partner" positions on the Net Search page. By default, the page will open to Netscape

Search 25 percent of the time.

Netscape's new partner Excite also receives a traffic share of 25 percent. The remainder of the page's traffic is rotated among veteran Net Search partners Infoseek and Lycos, and two newcomers to the premier line-up, AltaVista and LookSmart. Previously, these two had shared pace within the now defunct Marquee Provider section.

Exact traffic shares for these remaining four were not disclosed, except that none are getting more than a 15 percent share.

Next year, Netscape Search will jump to receiving a 50 percent slice of the traffic, while Excite will stay at the same level and everyone else will share the remaining 25 percent.

Yahoo is the biggest absence. The company decided that it no longer needed a strong presence on the page, due to the considerable traffic it receives beyond Netscape. Reports are that only five to eight percent of Yahoo's traffic came from Netscape. Now it is listed below the fold, among numerous other search options.

Yahoo is also abandoning its partnership with Netscape to produce the Netscape Guide By Yahoo. The partnership began last year, but it made little sense for it to continue in the wake of Excite landing a \$70 million deal to program the Netscape web site.

Netscape decided in March to try and emulate the success of search-turned-portal sites such as Excite and Yahoo by building out content within its own site. It relabeled its site "Netscape Netcenter," then went on the hunt for someone to provide it with a branded search engine and build out content for web surfers.

Excite won the bid in May. Over the next two years, it will produce content for the site and power Netscape Search. In return, it receives the right to sell advertising and positioning partnerships within Netcenter, plus receives its own positioning on the Net Search page. New content should be appearing within the month, Excite says.

Eyebrows have been raised over the huge sum Excite paid, especially in light of the fact that Yahoo says it couldn't earn the money it had expected when it was producing content for Netscape.

Excite Executive Vice President Brett Bullington says his company can do better. He also points out that \$20 million would have been spent on positioning Excite within Netscape anyway, leaving only \$50 million that it needs to recover through ad and partnership sales. "Can we sell \$25 million this year and next year? I think we should be able to," Bullington said.

In fact, Excite just announced that it has signed agreements for \$21 million in advertising revenues in connection with the deal, putting it a third of the way toward covering the initial cost.

Concerns have also been raised over the fact that Netscape can walk away from Excite after the two years but keep all the content and programming tools Excite creates for it. The possible repercussions of such a handover are one of the reasons Yahoo declined the deal.

"The coup de grace for us was the turning over the technology and tools to Netscape, with no guarantee of renewal. Basically, you could create a competitor," said Jeff Mallett, Yahoo's chief operating officer.

Again, Excite says it can make the partnership work to its advantage. "We think in the end, we'll both learn how to win and exit with something out of it," Bullington said. In the strange land of the Internet, where "cooperation" rules, he may be right.

Meanwhile, on the heels of getting its search partnerships in order, Netscape has announced it plans to implement new "Smart Browsing" features by the end of July. These will likely incorporate *Alexa* site discovery technology into the browser and a word addressing system that sounds similar to Real Name, described below. However, the system will probably depend more on forwarding queries to search services. Expect more on this next month.

#### Yahoo ends ties to Netscape

News.com, May 21, 1998

<http://news.com/News/Item/0,4,22402,00.html>

Yahoo's reasons for departing Netscape, with some interesting stats on the share of traffic it had received.

#### High-Stakes Deal For Excite, Netscape

Internet World, May 11, 1998

<http://www.internetworld.com/print/current/news/19980511-stakes.html>

General details on the partnership.

#### Why Infoseek Walked

Red Herring, May 12, 1998

<http://www.herring.com/insider/1998/0512/seekwalks.html>

Nice details on why Infoseek didn't think the Netscape deal was good for it to pursue, along with some stats on traffic the service has received from Netscape.

#### Excite Executives Cross Their Fingers That Payoff Will Come

Internet World, May 11, 1998

<http://www.internetworld.com/print/current/news/19980511-fingers.html>

Details on the amount Excite is paying to Netscape, along with guarantees that it gets some money back if expected traffic levels aren't reached.

**Excite to power Netscape search***News.com, May 4, 1998*<http://www.news.com/News/Item/0,4,21757,00.html>

General details on the partnership.

**Alexa: Searching Serendipity And More***The Search Engine Report, Jan. 9, 1998*<http://searchenginewatch.com/serereport/9801-alexa.html>

More about *Alexa*, whose technology Netscape will be using soon.

**Real Name Tops At AltaVista**

AltaVista is now listing Real Name addresses at the top of its search results, a move which makes it much easier for web marketers to be found for their company names and which may help some users more easily find what they are looking for.

Real Name is an alternative web site addressing system from Centraal Corporation. The system allows people to reach web sites by entering words such as "Barnes & Noble" into their browser's address box, rather than having to enter a URL such as "http://www.barnesandnoble.com."

Until the AltaVista deal, the system's biggest problem was that it only worked for those with Real Name-capable browsers. That meant downloading special software, which is a hurdle in the way of widespread acceptance.

Centraal hopes to solve this problem by getting Microsoft and Netscape to build native Real Name support into their next browsers. But the AltaVista partnership, which began in May, could allow the system to fly regardless of this. That's because it solves a bigger problem of economically making search engine results more relevant for some searches.

Consider things from a web user's point of view. Imagine you want to go to Nike's web site. What's the address? Net savvy people will guess at "http://www.nike.com" and get there just fine. In fact, depending on your browser and the company's web server, you can get away with entering "nike.com" or even just "nike."

It's a bit more complicated with Barnes & Noble. Is it barnesandnoble.com, barnes-and-noble.com or barnes&noble.com? The last example isn't allowed under the current domain name system, but no doubt people try and feel frustrated when nothing loads.

Real Name suggests its system will be the solution to all this. However, net savvy and non-savvy people already have a solution they've been using for years, when they don't know an address. They turn to the search services, just as people turn to a phone book or directory assistance when they need a phone number.

That's the basic reason why search services have become so popular. Likewise, it is the reason many web marketers become so frustrated with them. The boss goes to a favorite search service, looks for the company by name, can't find it and goes on the warpath. Get it fixed, the boss demands.

Fixing it might not be easy, for some people. The answer may involve understanding meta tags, appropriate page titles and the need for decent copy at the company's graphic heavy web site.

Here's where Real Name provides a simple solution. It sweeps aside all those complications. Instead, you just pay your \$40 annual fee, and you'll come up tops for your name on AltaVista, guaranteed.

At this point, the old "selling listings" alarm bells are probably ringing with some people. Has AltaVista sold out? Shouldn't only the most relevant results come first? Hold your panic, and let's see the system in action.

Remember Nike? Do a search for "Nike" at AltaVista, and as happens with many major companies, no pages from the Nike site are top ranked. Before the Real Name partnership, both Nike and someone looking for the company were probably disappointed. Now, Nike's site gets top billing because the company has registered its name as a Real Name address.

Ideally, AltaVista and the other search engines should ensure that Nike and other important companies are top listed for their names, anyway. But to do so, they might have to manually configure or tweak the results for particular names.

That's not too much work when you are talking about ensuring that just Fortune 1000 companies are top listed for their own names. But what happens when smaller businesses want to ensure they come up first for their names? That's more time consuming.

The partnership with Centraal provides a solution. It gives people a way to get on top for their names in AltaVista without the service having to lift a finger. In fact, AltaVista even collects a share of the revenues.

Nor are search engine users harmed. AltaVista's own results are not altered one bit. The Real Name link is simply prefacing them, which makes perfect sense. Nike and other companies should come up first for a search on their own names. It's what both the company and most search engine users would expect.

Sound perfect? There are gray areas and a big fat loophole that allows the "selling listings" fears to return.





PA-D10

DAILY NEWSPAPER

## THE MORNING CALL

Allentown, PA

Circ - (M) 133,735 (S) 185,557

JUNE 13, 1998



## Bacon's

3985 A

## Upgrade may help you make most of 'Fabulous Freebies'



Tim Blangger

The software site [www.download.com](http://www.download.com) keeps a list of what it calls its "50 Fabulous Freebies," and the list is both a good

gauge of what's free and popular among your fellow Net citizens.

But, if you peruse the list, you'll quickly discover that most of the software is being written for computers using either the Windows 95 or Windows NT operating system. In the top 20, five programs are available for computers using the older Windows 3.1 or 3.11 operating systems, which still represents between 50 and 60 percent of all computer users.

Macintosh users face an even smaller number of choices. Only two of the top 20 freebie software that have versions for the

Macintosh. Most of the remaining 50 also require at least Windows 95 or Windows NT.

The future, at least the immediate version of it, seems to suggest that if you don't have at least Windows 95, you're going to have trouble using any of the nifty new software now being developed, including the two software packages detailed below.

Now, I realize this is overstating the case somewhat, and that there are plenty of quality Macintosh software programs

out there. And, despite not having the sheer number of programs, there are applications on the freeware list that are impor-

tant Net tools written for both platforms, including both of the more popular Web browsing programs (Netscape and Internet Explorer) as well as ICQ, the chat program that is one of the most useful and flexible Net freeware programs.



See ONLINE Page D6 ▶

mp6

## LINE

Continued From Page D1

But the Treebeast list serves up a set of circumstances that is difficult to ignore.

This is, at best, an unfortunate situation for the Internet based on the new somewhat quaint idea of open computing, where several types of computers and operating systems can access the software on individual users' 50 Fathoms. Just it will be interesting to see who is talking about open computing in the years to come.

Anyway, on to the software, all of it for Windows 95 or Windows NT.

When Informant Alpha is yet another piece of Web software supported by advertisements. This one does several things. First, it all the new Web pages that are available on the Internet.

One installing Alpha provided Web surfers with some useful information about the site they are visiting. The site is a mailing address for the site's creator, and the site has been approved for electronic commerce — in other words, it is a good idea to use a credit card

with the site.

Also, it provides links to an archive of 300,000 Internet pages. If the page is not available, the user is directed to the archived Web page, rather than simply giving the user the standard "not found" error message.

In addition, the software provides a list of Web pages with similar titles. Also, it provides links to three browsers: Netscape Navigator 3.0 or higher, Netscape Communicator 4.0 or higher, and Internet Explorer 3.0 or higher. The software also provides a list of Web pages with similar titles.

At least a 486 is required to run the software. The software is based on a 256-color monitor and 3 Megabytes (MB) of RAM (Random Access Memory). Users of Windows 95 also will need an updated "kernel" file.

This is a 640 x 480 screen. "Link" to the software is available from the updated dynamic library link (cd) file available from both the Alpha site, www.alpha.com, and from Microsoft's main site.

According to information on the Alpha site, there is a listed version for Power Macintosh users, but it is only for Power Macs that access the Net with Ethernet

connection. If you use non-PowerMac machines (generally called "slk machines"), or if you use a dial-up connection — that is, connect for the moment — you can still use the software. But this year.

Audio/Visual Update: Real Networks, creators of one of the more useful audio/visual programs on the Net, RealPlayer, has come out with an improved version, RealPlayer 4.0. The new version is called RealSystem G2.

This promises improvements in the sound and video quality, no to matter what speed you connect to the Net with. The software also promises to be faster than the current version of RealPlayer. The software is available from the RealNetwork site at [www.real.com](http://www.real.com).

The RealNetwork folks recommend that people use the G2 player for downloading and playback of audio and video files. A non-preview version of G2 will be out, also. There's no word on when a version for Mac users will be out.

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London's Valley Computer Group will

out, use the latest version of RealPlayer (3.0) to do most of the audio/visual work. Because of the RealPlayer's ability to handle 3.1 to Windows 95 as well as moving your PC from Windows 95 to Windows 98. This begins at 24 p.m. at the group's website, World Headquarters, 2100 Mac Boulevard, on Allen

might expect, not too many Real sites use this yet, but use want Real Network the latest software, so you can see the difference.

Windows Change: The

home's south side

Online appears every two weeks in A.M. The site is a semi-regular will cover upgrading from 3.1 to Windows 98 as well as moving your PC from Windows 95 to Windows 98. This begins at 24 p.m. at the group's website, World Headquarters, 2100 Mac Boulevard, on Allen

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MC-0380 DAILY NEWSPAPER  
THE NEWS & OBSERVER  
Raleigh, NC

DN - (M) 51, 49 38 27, 257

JUNE 14, 1998



**Bacon's**

# 'Smart browsing' may turn into dumb move by Netscape

Watching Netscape trying to reinvent itself has become an annual exercise, sort of like spring training or the signing of free agents. But this time, the gamble seems different. While opportunity knocks in the form of an antitrust case against Microsoft,

Netscape's strategic plan remains untouched.

And now we have the latest Netscape rebirth, this time as a gateway service to the Internet. The new move attempts to build Netscape's NetCenter service into a home base for Netscape browser. The idea is to use the company's powerful capabilities to expand it into a major Internet gateway with a host of user-friendly features not unlike those of Yahoo! or even America Online.

Does this sound familiar? In its own

way, Netscape is taking a cue from Microsoft. The latter has taken your Net access by making its browser an integral part of the operating system it produces. The former hopes to give you an Internet portal service that you'll find so attractive, with its directories, services and personalized start page, that you'll inevitably want to use its browser.

Indeed, so-called "portals" are suddenly hot properties. A portal is a gateway site. The first thing you see when you log on to a portal is a directory of destinations, moving navigation features with news and advertising. Properly built, a portal builds a sense of community among users and draws marketers attracted by its base of repeat customers.

The portal concept is what made AOL the unexpected Netscape rival. And the unexpected Netscape rival is joining a market already crowded with the likes of Yahoo!, Excite, InfoSeek, Lycos and the soon-to-be-opened Start.com from Microsoft. Everybody assumes that the Net is only going to keep growing, and everyone wants to control the access routes. The winners will be those who

can combine functionality with features that are easy to use, for the Net is no longer dominated by features but by consumers.

Netscape's plan is to create so-called "smart browsing" at its site. Type a word into the browser's location bar (where you would normally place an Internet address), and the browser will pull up the address for you.

Enter "Ford," for example, and you go to the company's Web site. If your term is generic, the browser will call up a subject guide from the Excite directory. And if the browser can't figure out what you want, it will use your keyword and run a search for you.

A second feature designed to simplify the Net is drawn from Netscape's recent augmentations. The browser will deliver you Web links, Web use and behavior list of Web sites related by topic to the one you're currently looking at. Ideally, you move between sites with a minimum of fuss, always able to categorize and group information as needed.

And finally, a new NetWatch feature will provide rating systems that parents

can use to filter Net content for their children.

All three features will be part of NetCenter 2.0, which is due out at the end of June. Millions of people already use Netscape's browser; most of them accept its default settings and therefore wind up at the Netscape site ([home.netscape.com](http://home.netscape.com)) every time they log on to the Internet.

The idea is to hook this huge audience on the new NetCenter features; they'll then want to upgrade to the next version of Netscape's Communicator product, which will include these features as an integral part of the package. Further tightening the loop is an apparently obvious move: The browser, along with these easy third-party add-ons that extend its range. Instead of having to check version numbers and download new files, you'll be able to let your browser keep itself updated with all the latest components.

A personalized home page also will be available, allowing you to customize your Web experience. Bob Yalton and Excite have used personalized home pages to

significantly expand their repeat traffic. So, what's wrong with Netscape's plan? The company behind it, that's what. In reinventing itself, Netscape runs the risk of diluting its resources. Content development is a game this technology company hasn't played well. It demands skillful marketing and an understanding of consumer tastes.

Netscape comes late to the fray and will need to completely reinvent itself to succeed. While the browser wars continue, it will take more time than Microsoft. Microsoft has the momentum against Netscape. So, the Internet on Netscape's bid to be the Internet's chief entry point. If I'm right, it marks a dangerous diversion of resources at a time when the company needs to be tightening its focus on the corporate markets it once claimed as its own. When Netscape speaks of "convergence" between these markets and the Internet, portal business hardly uses the term "ecosystem" to describe the result, what I hear is "jargon" and what I see ahead is trouble.

Paul Galsler can be reached at [pg@antennagroup.com](mailto:pg@antennagroup.com)



Paul Galsler



June 2003 1998

cyber

the village VOICE WORLDWIDE

## Machine Age

by Austin Bunn



**Taking in the Trash** When historians finally get around to tackling the Net, the Net will likely tackle them. The source material is already so suffused with static--abandoned home pages, XXX spam, and countless messages that venture, "Testing . . . Are you there?"--that the human signal may be impossible to pick out from the noise. And the volume is only getting louder. The three-year-old WWWAC list ([www.wac.org](http://www.wac.org)), a 3000-person e-mail congress of mostly New York designers and entrepreneurs, is reaching the tipping point with its archives on servers at Echo. Query the archives through e-mail and you can easily read the handful of initial posts ("Hello, there . . . the few, the proud" and "Hi. I've got the chips, who brought the dip?") from January 1995. But try to read May 1998's file and Echo's software can't deal with it, says list administrator Larry Aronson. "The file is just too enormous."

**Talk back!**  
[editor@villagevoice.com](mailto:editor@villagevoice.com)

**PAZZ & JOP CRITICS' POLL**  
What won't they take the funk out of next?

free  
Win tickets

If we can save everything, then should we? Artist Mark Napier's idea is to decide what's junk and start dumping--not trash the files exactly, but make a public spectacle of them, a tea party of ephemera. Last week, Napier unveiled his virtual compost heap, called the "Digital Landfill" ([potatoland.org/landfill](http://potatoland.org/landfill)), where users can deposit graphics, text, and animations into a roiling stack of castoffs. The site layers the donations on top of one another, so what you get is, not surprisingly, an absolute mess. But, as he notes, our ruins reveal as much about us as our monuments. "The landfill is not supposed to have value," he says. "It creates a view of the subconscious of the Web culture."

Some bits are a little more conscious than others. Last fall, Napier drew the ire of the toy company Mattel for his twisted online culture jam "The Distorted Barbie," where he digitally mutated the plastic bombshell ([interport.net/napier/barbie](http://interport.net/napier/barbie)). Napier added the



## MACHINE AGE

BY AUSTIN BUNN

Taking  
in the Trash

**W**hen historians finally get around to tacking the Net, the Net will likely rack them. The source material is already so sufficed with static—abundant home pages, XXX.com, and countless messages that venture, "Tennig. Are you there?"—that the human signal may be impossible to pick out from the noise. And the volume is only getting louder. The three-year-old WWWAC list ([www.wac.org](http://www.wac.org)), a 3000-person e-mail congress of mostly New York designers and entrepreneurs, is reaching the tipping point with its archives on servers at Echo. Query the archives through e-mail and you can easily read the handful of initial posts ("Hello, there... the lion, the proud" and "I'll be gone the chips, who brought the clip?") from January 1995. But try to read May 1998's file and Alexa's software can't deal with it, says list administrator Larry Aronson. "The file is just too enormous."

If we can save everything, then should we? Artist Mark Napier's idea is to decide what's junk and start dumping—but trash the files exactly, but make a public spectacle of it, a test party of ephemerality. Last week, Napier unveiled his virtual compost heap, called the "Digital Landfill" ([postand.org/landfill](http://postand.org/landfill)), where users can deposit graphics, text, and animations into a rolling stack of caskets. The site layers the donations on top of one another, so what you get is, not surprisingly, an absolute mess. But, as he notes, our ruins reveal as much about us as our monuments. "The landfill is not supposed to have value," he says. "It creates a view of the subconscious of the Web culture."

Some bits are a little more conscious than others. Last fall, Napier drew the ire of the toy company Mattel for his twisted online culture jam "The Diamond Barbie," where he digitally mutated the plastic bombshell (internet.napier/barbie). Napier added the "cease and desist" letter he received from Mattel to the landfill. "I made the digital landfill so that I had a place to throw this letter," he admits. With the landfill, he wants to raise questions about the future of digital objects that don't decay. "In 20 years, will we be collecting digital artifacts?" he asks.

The neigevonion root Alexa ([alexa.com](http://alexa.com)) already is. Developed by the people behind the Internet Archive ([archive.org](http://archive.org))—the Library of Congress of the Net—Alexa runs below the browser and provides information about the Web page that you're looking at, who owns it, where more users go to from it, and, if the page is missing, what it used to look like. If you encounter a "404 File Not Found" on a site, Alexa searches through its database of 500,000 Web sites to fill the hole with an archival version. "As a navigation feature, it seems like why use this? Why is this here?" says Alexa CEO and president Brew-

ster Kable. "But the 404 service has been very useful to a few people, like those who lose pages on their own servers if they crash."

Effectively, it's a form of public salvage. To Alexa, nothing is junk—just unpopular. Alexa blindly stores everything on the Net onto tapes, now containing over 10 terabytes of data—over half the amount in the Library of Congress, says Kable. But its 100,000 active users are pruning the data through their collective prisms, which other users can follow. One Alexa stat shows that just 1000 users account for half of the traffic on the Web. "The Web made everyone into a publisher,

smaller efforts at regulation, like the non-profit data control service TRUSTe (which Dyson helped instigate), face the challenge of "legitimation," said M. Spasser.

The government white paper on domain names policy, ([initials.gov/initials/domainnames/6\\_5\\_98.htm](http://initials.gov/initials/domainnames/6_5_98.htm)), released on June 5 and debated by the panel, will face its own questions of legitimacy. The initiative calls for a non-profit organization, consisting of "stakeholders" from all interested companies, to rule over the naming out of the top-level domains like ".com" and ".net," wresting control away from the Corporation Network Solutions,

which currently manages the system. While Lessig agrees with the new system in theory, he argued that the problem is that we don't know who the "stakeholders" are, and that in many debates (like that over encryption) we are all stakeholders.

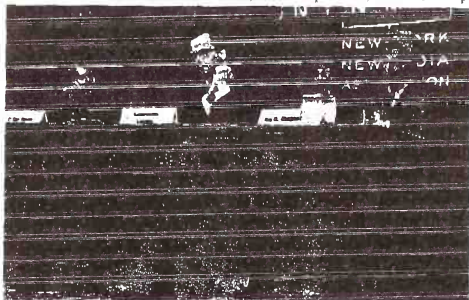
And that's the issue that haunts us as the Net comes closer to being regulated by specific bodies, who is choosing them? Just what constitutes citizenship, exactly, and when do we get to vote? The mitigation toward overreaching ruling groups—like the domain name dispute—signals a trend away from consensus and public debate, toward Lessig. "We're not democrats anymore, but that should force us to figure out why."

## Signal and Noise

► Agencies David Rennie nabbed \$200,000 for Lenin's Tomb. Joe Klein got his own \$200K for *Primary Colors*. For those bucking to get published, the Agent Research & Evaluation site ([agentresearch.com](http://agentresearch.com)), created by Bill Marun and his wife, author Beverly Byrne, is intended to "empower authors" with an extensive database of about 850 literary agents, their deals, and the 10,000 authors they rep. Though essentially a promotional site for a \$30 yearly newsletter, AR&E will offer a telling list of the highest-powered agents behind the best-sellers and an "Agent Verification" function to let writers interrogate the database to ascertain whether their newest suitor is legit.

► Hacklob. First, John Markoff of the *Times* wrote a front-page story on hacker Kevin Mitnick. Next came the book deal for *Takedown*—a collaboration between Markoff and Mitnick's captor Tsutomu Shimomura. Now, Mitnick is rolling on the *Takedown* film, set to star Skeet Ulrich as Mitnick. But can Skeet type 90 words a minute and glower at the same time?

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Bigwig confab: Esther Dyson, Lawrence Lessig, and Ira C. Magaziner discuss the future

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Even with all the evident chaos that remains, Kable still believes wholeheartedly in broad preservation. "We want a feel of what the whole Net looks like," he says. But he recognizes that Alexa's storage system is a work for now because most of the data will be text. At he says, "[storage] starts to become a real issue of volume when everybody has a camcorder pointed at their kid's candle."

Federalist  
Papers 2.0

**T**he question was like trying to sluice a tidal wave: where do you draw the line and declaim, "Government begins here?" At last week's all-star panel, "The Internet & Public Policy: Who's in Control?" Harvard Law professor and panelist Lawrence Lessig nailed the recalcitrant spirit of Netizens. "We don't have a problem with governance in cyberspace," said the rhetorically polished Lessig. "We have a problem with governance."

The three preoccupies in the discussion, sponsored by the New York New Media Association, would be the inaugural members of the Net's constitutional convention if one ever were convened: Lessig (who also serves as "special master" in the Microsoft antitrust case), Ira Magaziner (a presidential senior adviser and framer of the latest domain name policy), and Esther Dyson (venture capitalist and author of *Release 2.0*). They are possibly the only people capable of wrestling with the policy debate coherently—or, as they proved last week, at least able to properly frame the question.

The Net is exploding with ad hoc, private-industry governments, young colonies without state lines. With the rise of alternative ruling bodies to arbitrate the privacy and censorship debates—"private architectures" as Lessig terms them—"to call the government 'it' is a mistake," Dyson said. But

E-mail: [abunn@antenna.com](mailto:abunn@antenna.com)

Village Voice

6/23







"cease and desist" letter he received from Mattel to the landfill. "I made the digital landfill so that I had a place to throw that letter," he admits. With the landfill, he wants to raise questions about the future of digital objects that don't decay. "In 20 years, will we be collecting digital antiques?" he asks.

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The Nation's Homepage

**Secrets about online privacy**

Internet privacy is in the news this week, as trade associations announce self-regulatory plans and the Department of Commerce holds a two-day privacy summit to assess threats to online privacy and the technological and industry solutions available.

But what exactly should you be worried about as you wander the Web?

Remember that convenience vs. privacy has always been a trade-off. If your bank teller knows you by name, you can cash a check without ID, but he'll also remember when you clear out your account prior to running away to Tahiti. The grocery clerk from your church may let you pay later if you forget your wallet, but do you want to buy the latest copy of *Playboy* from her?

We make decisions about who should know what about us every day in the real world. But we may not realize just how much of an open book our lives are on the Internet — or we may be more worried than we need to be.

Many users' first concern is whether a Web site can figure out who they are just by viewing a page. Happily, the answer is no.

All Web sites generate what are known as user logs, second-by-second listings of visitors to the site, which pages they looked at and how long they looked.

But note that when a log lists visitors, it merely means the name of

The Center for Democracy and Technology lists tips for keeping information private. Among them:

- Check for a Web site's privacy policy. If the site operators don't tell you what they plan to do with the data they collect about you, do you really want to give it to them?
- Clear your browser's memory cache after each session online. The cache saves copies of the pages you visited, making return trips quicker but also leaving a trail of your wanderings. To delete it, go to your browser's Preferences folder and click "Empty Cache."
- Don't accept "cookies," thus refusing to give Web sites any information about you when you return.

the computer that hooks the user to the Internet. If you're an AOL user, the log would say "AOL user." If you've got an account from a local Internet service provider, it might give the name of one of that ISP's computers, say, Haiti4.hooked.net

Despite public fears to the contrary, there's actually very little individually identifiable information that can be gleaned from your merely visiting a Web site. For a look at what a site can see about you, use the Center for Democracy and Technology (CDT) privacy demonstration page at [www.13x.com/cgi-bin/cdt/snoop.pl](http://www.13x.com/cgi-bin/cdt/snoop.pl).

CDT policy analyst Ari Schwartz points out that security flaws in some older Web browsers made it possible for sites to collect e-mail addresses if a special program was used. But those flaws have been fixed in all newer browsers, so there's little chance your e-mail address is accessible to the sites you visit.

The only real danger from visiting a site is that you might get "sprayed." In a technique used by some unscrupulous spammers, or junk e-mailers, the site notes it has had a visit from a certain Internet server and then "sprays" everyone at that host name with e-mail. Mail of this type, if the spammer hasn't bothered to cover its tracks, will come addressed (as an example) to [anybody@usatoday.com](mailto:anybody@usatoday.com), and will hit all working addresses at that computer.

### **Concerns over cookies**

When a Web site drops what's known as a "cookie" on your computer's hard drive, more information becomes accessible, but still not your real name or e-mail address. Cookies are small bundles of code that allow the Web site's computer to recognize you as a return visitor, though only a number.

Cookies let Web sites keep track of what a user is doing for the duration of a visit. For example, cookies make shopping easier. When you go to the L.L. Bean Web site, you can put the boots on page 4 in your shopping basket and the site knows you're the person who wants a pair of size 11s long before you get to the page where you fill in your name, address and credit card number.

This also allows the site to tailor to your specific interests the banner ads that pop up. It may not know your name, but it knows that Customer 5423 is interested in international politics, wind surfing and fine wine. Thus, as 5423 surfs through the site, or comes back on a return visit, the ads that pop up are more likely to be for travel, extreme sports and a vintage-of-the-month club.

None of this really worries privacy experts, as Customer 5423 remains anonymous. What keeps them up at night is what happens when Customer 5423 divulges specific identifying information

about himself online, either to register for a site, to buy something or to take part in a survey or contest.

It's called push-forward marketing, and suddenly Customer 5423 becomes Jason R. Public, and a marketing person's dream.

Once a site can connect your name or e-mail address with other information you might give it — age, sex, income, interests, number of children, whatever — the whole game changes. Every time you visit the site, it gathers more information about your interests. That data may lead to tailored content, but also to information that can be sold.

Not that this doesn't already happen in the physical world, points out John Featherman, editor of the *Privacy Newsletter*. "Within three weeks of subscribing to *Time*, you're getting offers to subscribe to *U.S. News & World Report*. What happened was you got on *Time's* list and either through themselves or through a list manager, they brokered your name."

Online, the process is merely quicker and more prevalent, as most of us subscribe to only a few magazines, but visit hundreds of Web sites. Agencies make about a dime per e-mail address, more if it's a list of a specific type, such as all women or all confirmed buyers of online goods.

This week's announcements by industry groups such as the Online Privacy Alliance ([www.privacyalliance.org](http://www.privacyalliance.org)), the Council of Better Business Bureau's OnLine Privacy Program ([www.bbbonline.org](http://www.bbbonline.org)) and TRUSTe ([www.truste.org](http://www.truste.org)) all focused on providing Web users with clear descriptions of what information is being collected and what would be done with it. Each group has rules requiring that member sites make it easy for users to choose not to allow their information to be used for anything but the original reason it was requested.

That would be welcome news to *Privacy Journal* publisher Robert Ellis Smith, who tracks just how hard it can be to say "no." He says, "My personal experience is that even those with personal privacy policies make it extremely difficult to opt out. You have to call an 800 number, for example."

**No more privacy in distance**

But even if you've never registered at a Web site in your life, a remarkable amount of information is available about you online. Reverse-phone-look-up directories, mapping services and online white pages all make it easier than ever to find someone, a boon if you're looking for a long-lost friend but sinister if you're being stalked, or simply value your anonymity.

Reverse-look-up directories — such as the one at InfoSpace ([www.infospace.com](http://www.infospace.com)) — are arranged by phone number or address rather than name. Formerly quite cumbersome and available only as local references in newsrooms and libraries, they've suddenly become simple and national in scope. Type in a phone number, and find the name and the address of the person it belongs to. Type in the address, and get the name and phone number.

Beyond that, there are numerous free mapping sites, such as [www.mapquest.com](http://www.mapquest.com), that do an excellent job of taking two addresses and drawing a door-to-door map between them, across town or across country. Thus, the presumed privacy of distance evaporates like morning fog.

To test how much information one tiny identifier might give up on its own, Ellis provided one of his *Privacy Journal* interns a single phone number and asked him to find everything he could about the person it belonged to.

"He was able to get the name and address, and then the office name. Then we were able to get the address there. And then we were able to get the person's job title, and then we got a map to that address, and from that we were able to get addresses for their neighbors."

While it's certainly not illegal, or even unethical, there's something a little creepy about looking up your mother (who's never been online in her life) and finding her address, her phone number, a list of all her neighbors and turn-by-turn directions to her house.

### **A trail of breadcrumbs**

Things get much more interesting when you're looking for information about someone who spends a lot of time on the Internet. Services such as DejaNews ([www.dejanews.com](http://www.dejanews.com)) keep archives of Usenet news-group postings and the Web, so musings you might have thought minor become the stuff of history.

If you've ever posted to a news group, or participated in a Web site's discussion, there's a good chance DejaNews has the exchange in its archives. Though companies don't make it generally known, in private some say they routinely do a search on potential hires' names to see what they've been spouting off about.

And remember that Web site your teen-ager put up that you made him take down as soon as you saw it? If Brewster Kahle's Internet Archive program got to it before you did, it now is forever preserved in not one but two repositories, eternally available to those who visit [www.alexa.com](http://www.alexa.com).

Our control over our information online should increase



dramatically over the next six months, as businesses scramble to self-regulate. (Follow the summit's proceedings at [www.ntia.doc.gov](http://www.ntia.doc.gov).)

The Clinton administration is scrambling to match Europe's tougher online privacy standards that take effect Oct. 25. Companies wanting to do business there must match its much-stricter privacy safeguards, which include not using information gathered online from Europeans for uses other than those stated.

"The (old) status quo was very few laws and only mild threats to privacy. The new status quo is more threats to privacy," says Peter Swire, a professor of law at Ohio State University and an expert on international privacy issues. "The question is, do we need new laws?"

*By Elizabeth Weise, USA TODAY*

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## The Net

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### Alexa stats now on IE 4

By Beth Lipton

Staff Writer, CNET NEWS.COM

June 29, 1998, 1:25 p.m. PT

audio [Alexa Internet](#) has updated its "surf engine" technology with a version designed specifically for Microsoft Internet Explorer 4.0 users.

Alexa Internet's technology is installed into a user's browser and provides site statistics and related sites wherever she or he goes on the Web. The goal is to aid the surfer in doing research or comparison shopping, for example, the firm said.

The new technology, Alexa 2.0 for IE 4.0, loads like a Web page and can be installed in less than a minute, according to Alexa Internet. The 45K application is installed with the click of a mouse; there are no download and install procedures. Alexa 2.0 appears in the browser frame as a toolbar and displays information about the sites a user visits in the IE sidebar.

The site statistics by Alexa 2.0 include to whom the site is registered, how popular it is, how many sites link to it, and whether it is safe for e-commerce. The technology also offers a list of related sites based on other Alexa user patterns.

Netscape [incorporated](#) Alexa technology into its upcoming Communicator 4.5 suite, as part of the "smart browsing" offerings. A "what's related" feature, developed from a partnership between Netscape and Alexa, provides a drop-down box with an automatically generated list of recommended related sites. The feature relies on servers for Netcenter (Netscape's portal site) for a database of links, which are automatically updated via software that tracks surfers' Web usage.

Alexa is archiving publicly available content on the Web so that users who get a "404 Not Found" error message can view the most

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Found" error message can view the most recently archived version of an unavailable Web page.

"The Alexa service has been the Web's best-kept secret, reserved largely for those Web surfers who like comparison-shopping the sites they are surfing," Peter Krasilovsky, vice president of research firm Arlen Communications, said in a statement.

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# The Alexa Effect

Can a new Web utility help topple the portal regime?  
Steven Johnson reports.

POSTED 06/26/98

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## CYBERIA

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Alexa, the first of a new genre of surf engines, is free to download from its site. The program is both search engine and personal web guide in one. Its "Where You Are" feature provides information about the site you are viewing; its "Where to Go Next" feature automatically provides you with links to related sites; its "Archive" allows you to find missing pages; and its reference section gives you a portable encyclopedia and dictionary.

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IS THE SOFTWARE INDUSTRY locked in a state of malaise? If you look beneath the daily exhaust of press releases and product launches, and focus more on ground-level innovation than market valuations, you might be inclined to say yes. Despite the constant flag-waving about its "right to innovate," Microsoft has just released a 120 MB bug fix, decked out in the emperor's new clothes of a Major Upgrade. Our interfaces remain tethered to conventions designed 20 years ago. Even *The Wall Street Journal* is now carping about the lack of progress in the software industry.

But if the digital paradigms are stagnating right now, there is still reason for encouragement. I think we may well be on the verge of another high-tech tipping point, and the most telling sign to date arrived last month, with Netscape's announcement that it would integrate a small net application called Alexa into its core browser product. While much of the high-tech world has fixated on Microsoft's agitated shell game with the browser and the desktop, the Alexa software does more to revolutionize our understanding of the web than anything in Windows98. And unlike Microsoft's cumbersome upgrade, it only takes a minute to download.

THE FACT THAT ALEXA has gone more or less unheralded shouldn't surprise us. Even the canonical great inventions of history -- the steam engine, the incandescent bulb, the telegraph -- were actually "invented" several times before the official credited date. In each case, though, the invention failed to ripple out into the wider society, and disappeared from world-history's view. As Jared Diamond writes in his Pulitzer-Prize-winning book, *Guns, Germs, and Steel*, "All recognized famous inventions had capable predecessors and made their improvements at a time when society was capable of using their product." For a tipping point to take place -- for the telegraph or the combustible engine to take off --

you need some sort of tweak to the basic model, and you need an environment that is hospitable to the innovation. The actual innovation can be small, as long as the wider context is a fertile one.

If you're measuring by the byte, Alexa's innovation certainly qualifies as "small." Or at least it qualifies on the client-side, where the user interacts with a 700K utility application that runs parallel to an ordinary browser, like Navigator or Explorer. On the server-side, however, Alexa is a behemoth: a massive conglomerate of tape drives, prowled by a mechanical hand fingering through 12 Terabytes of data -- "half the content of the books in the Library of Congress," says co-creator Brewster Kahle. The drives are devoted to storing and regurgitating the entire contents of the World Wide Web -- and not just its current state, but also earlier incarnations. This comprehensive storage technology enables the Alexa software to perform its most celebrated trick: retrieving old pages when the user encounters a "404: File Not Found" message. Most of the attention paid to Alexa to date has focused on this archiving feature, but the brilliance of the utility extends well beyond that.

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#### CYBERIA

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The official Alexa site contains links to other out recent articles that have been written about the web utility. As Peter Lyman, head librarian for the University of California at Berkeley and an Internet Archive board member, is quoted as saying in the *San Francisco Chronicle*, "Clearly we need better tools for exploring the web. Alexa is trying to help us find our way out of the forest by looking for trails where previous people have gone. It's the most promising idea about how we'll search the Internet in the future."

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In the most generic sense, Alexa belongs to the family of web guides, providing you with meta-information about sites, and recommending new places to visit. But its actual implementation reverses all of our expectations about how guide software is supposed to behave. Most guides on the web today are some variation of the tried-and-true portal model: a place you go for advice about how best to go elsewhere. And the advice dished out remains exclusively the product of individual human minds -- the muddled mass of interns and site-raters gathered together in the cubelands of SNAP, Yahoo, and Excite.

This is a perfectly logical way to structure a web guide business, but Alexa has nothing to do with it. In a real sense, Alexa offers the most persuasive challenge yet to this year's portal frenzy, mainly because it zeroes in on the contradiction at the heart of any successful search engine: the doorway is the destination. (Scott Rosenberg penned an extremely sharp piece on this theme in last week's Salon.) In a field that was supposed to be all about

There are currently  
11 posts for this segment.

6/29/98 Niall:  
"In Search of Lost Pages"



disintermediation, the portal sites have become, against all odds, the \$5 billion-dollar middle-men. According to the bizarre logic of the search engine wonderland, you have to go somewhere first to go somewhere else. The radical proposition behind Alexa is this: why not just go somewhere else?

**ALEXA APPEARS** on the screen as a small toolbar, launching alongside your web browser, waiting patiently at the bottom of the screen for you to request a URL through the browser: either by typing into the text field, selecting a bookmark, or clicking on a link. Once the application detects a URL request, it scurries off to the Alexa servers in San Francisco, where it queries the database for information about the page you're visiting. If the URL request ends in a File Not Found message, the Alexa application trolls through the archives for an earlier version of the page. (Webmasters beware -- that "click here for a picture of my dog" page you thought you trashed years ago may yet be reborn.) But Alexa also returns interesting information about valid pages, and this is where the program really breaks new ground.

Pay a visit to Yahoo with Alexa fired up in the background, and you'll see information about the web site's Internic registration; you'll see a site rating, compiled either from the ZD Net archives or from the collective ratings of Alexa users; you'll see information about Yahoo's traffic, the number of pages on its servers, even the speed of those servers. And by clicking on the tantalizing, vaguely-Win95-like "What's next?" button, you'll see a list of "similar sites" in the venerable web tradition of Firefly's recommendations agent: if you liked this site, you might like these others. (The recommendations for Yahoo were accurate enough, if predictable: Infoseek, Snap, AOL's home page.)



The easiest way to appreciate the beauty of this model is to take the above experiment (visit Yahoo with Alexa as a guide) and reverse it. You can visit Yahoo for information about Alexa, but unless the interns and the site-raters have bothered to cook up a review, you're not likely to find anything but pointers to pages on the Alexa site. But when you actually follow those links to Alexa, you leave




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## CYBERIA

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In *Scientific American* Brewster Kahle examines both the pressing need for and the difficulties of creating a digital archive of the internet. "Where we can read the 400 year-old books printed by Gutenberg, it is often difficult to read a 15 year-old computer disk."

The Commission for Preservation and Access in Washington DC has been researching the thorny problems faced trying to ensure the usability of the digital data over a period of decades. Where the Internet Archive will move the data to new media and new operating systems every 10 years, this only addresses part of the problem of preservation." 

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Yahoo behind. It takes a software application like Alexa to make you realize the absurdity of this behavior. What kind of guide stays behind every time you want to head out from base camp?

Alexa's founders have a term for this new category of web guides -- "surf engines." The guide accompanies you as you surf. There's something immediately satisfying about this model, even if the economics behind it aren't totally clear. (The Alexa toolbar leaves little room for advertising -- thus far the bread and butter of the portal sites.) Shifts like these can seem minor when you first encounter them, but if other software designers begin to emulate them, they could have a profound effect on the larger web ecology. As Kahle explained to me in an e-mail correspondence, "Where the search engines are going toward being 'portals' and keeping you on their content, 'surf engines' work with you no matter where you are." Embedded in that distinction is an entire web weltanschauung. "Alexa works to make the whole web useful," Kahle explains, "while the search engines are going towards the 10 channels model of TV."

All of which points to something puzzling in Netscape's decision to bundle Alexa with its July browser release. Having just re-invented itself as a portal site, competing with Yahoo and Excite, Netscape now decides to integrate the most formidable challenge to the search engine hegemony to date. Perhaps this is what savvy software companies do: bet on the most impressive young colt out of the gate, even if it's not running in the direction they'd like. (Certainly this has been Microsoft's strategy in recent years.) But a skeptic might be inclined to think that Netscape -- or at least the part of Netscape that fashions itself a portal company -- is putting its money behind a Trojan horse.

THE FEATURE THAT truly exploits the new possibilities of "surf engines" is Alexa's "What Next?" button. In its current manifestation, the software relies on several datapoints to divine related sites as you travel across the web. Sometimes that data is as straightforward -- and as Yahoo-like -- as an individual human's recommendation. But Alexa is increasingly relying on Firefly-like

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## CYBERIA

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Scott Rosenberg's Salon column explains why the web portal's value has been exaggerated. "[B]ig-media corporations -- daunted by the difficulty of building bustling web hubs from scratch -- are hungrily eyeing the existing portal-style businesses. The result? A marketplace that is wildly overvaluing the portal -- as if a doorway were more valuable than a whole building."

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collaborative filtering algorithms to generate its "What's next?" recommendations. The software learns by watching the behavior of other Alexa users: if a hundred users visit FEED and then hop over to Suck, then the software starts to perceive a connection between the two web sites, a connection that can be weakened or strengthened as more behavior is tracked. In other words, the associations are not the work of an individual consciousness, but rather the sum total of thousands and thousands of individual decisions, a map to the web culled together by following an unimaginable number of footprints.

It's an intoxicating idea, and a strangely fitting one. After all, a guide to the entire web should be more than just a collection of hand-crafted ratings. As Kahle says, "Learning from users is the only thing that scales to the size of the web." But it is more than just a scale issue; it's also one of adaptability. Alexa belongs to a species of code that can be classified -- borrowing a term from complexity theory -- as "emergent software." Emergent behavior describes the spontaneous order that self-organizes out of countless low-level decisions: neighborhoods, ant colonies, invisible hands. Alexa's power of association (this site is *like* these other sites) emerges out of the desultory travels of the Alexa user base. The understanding of the web doesn't reside with any single individual in that group; it develops, instead, out of the collective intelligence they create simply by surfing.

The fringe benefit of this model -- intelligent software that works from the bottom up, and not from the top down -- is that the software gets smarter the more people use it. If only a thousand people fire up Alexa alongside their browsers, the recommendations simply won't have enough data behind them to be accurate. But add another ten thousand users to the mix, and the site associations gain resolution dramatically. In other words, the software gets better at what it does when more people interact with it. This may have a familiar ring to readers who have been following the recent debate over the Microsoft monopoly, particularly the

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**FEED DAILY**

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In his Feed Daily, Steven Johnson looks at the run of portal acquisitions. "Now that Disney's holding 43% of Infoseek, and NBC has wrested control of junior portal Snap!, two of the big four television networks have bought their way into a market share online that rivals their share on television... [These new] portals may have Wall Street behind them, but it's quite possible that Netizens will reject this backhanded resurrection of the broadcast model."

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succession of op-eds and thinkpieces about "network externalities": the self-reinforcing feedback loop that develops when your product becomes more attractive the more people use it. But as the phrase suggests, those feedback loops are triggered by *external* properties of the software. Windows95 becomes more appealing with more users because there are more software applications, a wider range of compatible hardware, better technical support, and so on. The core functionality of Windows95 doesn't improve with more users; it's the code that surrounds the OS that gets more valuable. Emergent software like Alexa -- where the core functionality improves with a wider user base -- takes this phenomenon a step further. It may be time for the economists to start talking about network *internalities*.

Alexa's emergent model is not likely to spawn a monopoly like Microsoft's, of course, and it may not deliver a death-blow to the portal regime. (Or at least it won't without a hundred imitators.) But anyone still enamored by the original ethos of the web -- a mirror world that organizes and expands our collective intelligence -- should find something heartening in the Alexa application. While much of the digital landscape creeps towards the familiar patterns of broadcast television, Alexa serves as a small but potent reminder of what the web was supposed to be, and maybe even an augur of things to come.

Share your thoughts on emergent software and the portal regime in the FEED Loop.



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# Privacy sacrificed on Internet

## Others can learn about you, but don't let that stop you from surfing Web

By Elizabeth Weise  
Gannett News Service

Internet privacy has been in the news this week, as trade associations announce self-regulatory plans and the Department of Commerce has held a summit to assess threats to online privacy and the technological and industry solutions available.

But what exactly should you be worried about as you wander the Web?

Remember that convenience vs. privacy has always been a trade-off. If your bank teller knows you by name, you can cash a check without ID, but he'll also remember when you clear out your account prior to running away to Tahiti. The grocery clerk from your church may let you pay later if you forget your wallet, but do you want to buy the latest copy of Playboy from her? We make decisions about us every day in the real world. But we may not realize just how much to an open book our lives are on the Internet — or we may be more worried than we need to be.

Many users' first concern is whether a Web site can figure out who they are just by viewing a page. Happily, the answer is no.

All Web sites generate what are known as user logs, second-by-second listings of visitors to the site, which pages they looked at and how long they looked

But note that when a log lists visitors, it merely means the name of the computer that hooks the user to the Internet. If you're an AOL user, the log would say "AOL user." If you've got an account from a local Internet service provider, it might give the name of one of that ISP's computers, say, Hank's hooked net.

### Danger overstated

Despite public fears to the contrary, there's actually very little individually identifiable information that can be gleaned from your merely visiting a Web site. For a look at what a site can see about you, use the Center for Democracy and Technology (CDT) privacy demonstration page at [www.13x.com/cgi-bin/cdt/snoot.pl](http://www.13x.com/cgi-bin/cdt/snoot.pl).

CDT policy analyst Art Schwartz points out that security flaws in some older Web browsers made it possible for sites to collect e-mail addresses if a special program was used. But those flaws have been fixed in all newer browsers, so there's little chance your e-mail address is accessible to the sites you visit.

The only real danger from visiting a site is that you might get "sprayed," in a technique used by some unscrupulous spammers or junk e-mailers, the site notes it has had a visit from a certain Internet server and then "sprays" everyone at that host name with e-mail. Mail of this type, if the spam-

mer hasn't bothered to cover its tracks with some address (as an example) to anybody@today.com and will hit all working addresses at that computer.

### Concern over 'cookies'

When a Web site drops what's known as a "cookie" on your computer's hard drive, more information becomes accessible but still not your real name or e-mail address. Cookies are small bundles of code that allow the Web site's computer to recognize you as a return visitor, though only a number.

Cookies let Web sites keep track of what a user is doing for the duration of a visit. For example, cookies make shopping easier. When you go to the L.L. Bean Web site, you can put the boots on page 4 in your shopping basket and the site knows you're the person who wants a pair of size 11s long before you get to the page where you fill in your name, address and credit card number.

This also allows the site to tailor to your interests the banners that pop up. It may not know your name, but it knows that Customer 5432 is interested in international politics. Thus as 5432 surfs through the site or comes back on a return visit, the ads that pop up are more likely to be for travel, exotic items sports and a village-of-the-month club.

See Privacy 2C



The Times (Granville, GA) Granville News  
6/26/98

Bob Land USA TODAY



ued from 1C

None of this really worries privacy experts, as Customer 5423 remains anonymous. What keeps them up at night is what happens when Customer 5423 divulges specific identifying information about himself on line, either to register for a site, to buy something or to take part in a survey or contest.

It's called push-forward marketing, and suddenly Customer 5423 becomes Jason R. Public, and a marketing person's dream.

Once a site can connect your name or e-mail address with other information you might give it — age, sex, income, interests, number of children, whatever — the whole game changes. Every time you visit the site, it gathers more information about your interests. That data may lead to tailored content, but also to information that can be sold.

Not that this doesn't already happen in the physical world, points out John Featherman, editor of the Privacy Newsletter. "Within three weeks of subscribing to Time, you're getting offers to subscribe to U.S. News & World Report. What happened was you got on Time's list and either through themselves or through a list manager, they brokered your name."

Online, the process is merely quicker and more prevalent, as most of us subscribe to only a few magazines, but visit hundreds of Web sites. Agencies make about a dime per e-mail address, more if it's a list of a specific type, such as all women or all confirmed buyers of on-line goods.

This week's announcements by industry groups such as the Online Privacy Alliance ([www.privacyalliance.org](http://www.privacyalliance.org)), the Council of Better Business Bureau's OnLine Privacy Program ([www.bbbonline.org](http://www.bbbonline.org)) and TRUSTe ([www.truste.org](http://www.truste.org)) all focused on providing Web users with clear descriptions of what information is being collected and what would be done with it. Each group has rules requiring that member sites make it easy for users to choose not to allow their information to be used for anything but the original reason it was requested.

That would be welcome news to Privacy Journal publisher Robert Ellis Smith, who tracks just how hard it can be to say "no."

He says, "My personal experience is that even those with personal privacy policies make it ex-

**"The (old) status quo was very few laws and only mild threats to privacy. The new status quo is more threats to privacy."**

**Peter Swire  
law professor**

(remely difficult to opt out. You have to call an 800 number, for example.)

### No privacy in distance

But even if you've never registered at a Web site in your life, a remarkable amount of information is available about you on-line. Reverse phone-look-up directories, mapping services and on-line white pages all make it easier than ever to find someone, a boon if you're looking for a long-lost friend but sinister if you're being stalked, or simply value your anonymity.

Reverse-look-up directories — such as the one at InfoSpace ([www.infospace.com](http://www.infospace.com)) — are arranged by phone number or address rather than name. Formerly quite cumbersome and available only as local references in newspapers and libraries, they've suddenly become simple and national in scope. Type in a phone number, and find the name and the address of the person it belongs to. Type in the address, and get the name and phone number.

Beyond that, there are numerous free mapping sites, such as [www.mapquest.com](http://www.mapquest.com), that do an excellent job of taking two addresses and drawing a door-to-door map between them, across town or across country. Thus, the presumed privacy of distance evaporates like morning fog.

To test how much information one tiny identifier might give up on its own, Ellis provided one of his Privacy Journal interns a single phone number and asked him to find everything he could about the person it belonged to.

"He was able to get the name and address, and then the office name. Then we were able to get the address there. And then we were able to get the person's job title, and then we got a map to that address, and from that we were able to get ad-

resses for their neighbors."

While it's certainly not illegal, or even unethical, there's something a little creepy about looking up your mother (who's never been on line in her life) and finding her address, her phone number, a list of all her neighbors and turn-by-turn directions to her house.

### Trail of bread crumbs

Things get much more interesting when you're looking for information about someone who spends a lot of time on the Internet. Services such as DejaNews ([www.dejanews.com](http://www.dejanews.com)) keep archives of Usenet news-group postings and the Web, so musings you might have thought minor become the stuff of history.

If you've ever posted to a news group or participated in a Web site's discussion, there's a good chance DejaNews has the exchange in its archives. Though companies don't make it generally known, in private some say they routinely do a search on potential hires' names to see what they've been spouting off about.

And remember that Web site your teen-ager put up that you made him take down as soon as you saw it? If Brewster Kahle's Internet Archive program got to it before you did, it now is forever preserved in not one but two repositories, eternally available to those who visit [www.alexia.com](http://www.alexia.com).

Our control over our information on line should increase dramatically over the next six months, as businesses scramble to self-regulate. (Follow the summit's proceedings at [www.ntia.doc.gov](http://www.ntia.doc.gov).)

The Clinton administration is scrambling to match Europe's tougher online privacy standards that take effect Oct. 25. Companies wanting to do business there must match its much-stricter privacy safeguards, which include not using information gathered on-line from Europeans for uses other than those stated.

"The (old) status quo was very few laws and only mild threats to privacy. The new status quo is more threats to privacy," says Peter Swire, a professor of law at Ohio State University and an expert on international privacy issues.

"The question is, do we need new laws?"



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## DOWNLOADS AND RESOURCES

Haven't had enough of bots yet? Well, we've barely scratched the surface of this fascinating topic. Below, you'll find places where you can learn more about bots, use and interact with them over the Internet, and even download your own to run right from your desktop.

→ [SPIDERS ON YOUR DESKTOP:](#)  
[SEARCH BOTS](#)

→ [YOUR OWN PERSONAL SHOPPER:](#)  
[SHOP BOTS](#)

→ [SOMEONE TO TALK TO:](#)  
[CHAT BOTS](#)

### General information and archives

[BotSpot](#): Reviews of recently created bots, links to hundreds of bot-related Web sites, home of the "Bot of the Week" award

[The Simon Laven Page](#): An archive of chat bots; a Java-based chat area lets you talk to some of them

[Loebner Prize and Turing Test '98](#): The home sites of international bot intelligence contests

[The Web Robots Pages](#): Lots of information about search-oriented bots, including a list of more than 150 Web spiders

### Search bots

[CyBot](#) (Win95/NT, \$49.95, free demo) from Virtual Gallery Inc.

[MacroBot](#) (Win 95/NT, \$49, free demo) from Information Projects Group Inc.: Standalone search bot

[Web Bandit](#) (Win 95/NT, \$149, free demo) from JW's Software Gems

[WebMole](#) (Win95/NT, \$199, free demo) from Kestern Communications Group (also collects email addresses)

[WebSnake](#) (Win 95/NT, \$29, free demo) from Anawave

### Shop bots

[Acres Bookfinder](#): Shop for books from 20 online bookstores

[Bargainbot](#): Shop for books at multiple online bookstores

[Bargain Finder](#): Shop for CDs at a number of online music outlets

[COMPUTERS.COM](#)  
[BUILDER.COM](#)  
[GAMECENTER.COM](#)  
[DOWNLOAD.COM](#)  
[SHAREWARE.COM](#)  
[BROWSERS.COM](#)  
[SEARCH.COM](#)  
[SHOPPER.COM](#)  
[CAREER CENTER](#)  
[Snap!](#)

[BidFind](#): Shop for auction items from more than 50 online auction houses

[BottomDollar](#): Shop for books, music, computer gear, toys and more

[Excite Shopping Channel](#): Shop for computer gear, toys, gourmet coffee, garden equipment, and more

[MX Bookfinder](#): Shop for books at a number of independently owned online bookstores

## Chat bots

[Ask Jeeves](#): Web-based bot that links you to answers about movies, literature, history, science, and more

[DonLive](#): Comes with standalone chat software (Win 95/NT, Mac; \$15; free demo); replies to queries with content from *MacWeek* columnist Don Crabb's articles

[Eliza](#): The first chat bot ever written (now on the Web); plays the role of a Rogerian psychotherapist

[Erin](#): Web-based, a virtual bartender bot

[Julia](#): Telnet-based, an animal-loving bot

[The Milk Mystic](#): Web-based bot that answers all your milk-related questions

[PC Therapist](#): Standalone chat bot (DOS, Win 3.x, or Win 95/NT; \$65) that learns from past conversations; PC Professor and PC Politician are also available

[SEPO](#): Now on the Web, SEPO remembers and can build on previous conversations you've had with it; MegaHAL and HeX are similar bots at the site

[Shallow Red](#): Web-based bot that answers questions about its creator, Neuromedia

[TIPS](#): Telnet-based, answers questions about sex

## Other bots

[Alexa](#): A preference bot that runs side-by-side with your browser, noting the URLs you visit and suggesting alternatives based on its search engine and ratings of other Alexa users

[Firefly](#): The first preference bot--it matches your preferences with those of other Firefly users, and uses the comparisons to make site and product recommendations

[Ginkgo](#): IBM's assistant software that learns about people and processes, then makes appropriate suggestions. Unavailable by itself, Ginkgo works behind the scenes with applications such as Physician's Assistant, E-commerce Assistant, and E-mail assistant



[Let the Browser Work for You:](#) A list of dozens of offline browsers, bots that automatically download pages into your cache so you can view them from your hard drive later

[Phantom:](#) A Web site indexer that helps you build a search engine for your site

[Open Sesame:](#) A preference bot that returns rated content recommendations based on where you've surfed before

## **Intelligent agent research**

[Carnegie Mellon University's Intelligent Software Agents](#)

[IBM's T.J. Watson Research Intelligent Agents Project](#)

["Is It an Agent, or Just a Program? A Taxonomy for Autonomous Agents: A white paper by Stan Franklin and Art Graesser of the University of Memphis](#)

[Massachusetts Institute of Technology's Artificial Intelligence Laboratory](#)

[North Carolina State University's IntelliMedia Project](#)

[University of Massachusetts' Multiagent Systems Laboratory](#)

[The University of Tromso's Virtual Secretary Project](#)

[University of Washington's Internet Softbot Research](#)

[Worcester Polytechnic Institute's Artificial Intelligence Research Group](#)



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## ALEXA SURF ENGINE INTEGRATED WITH INTERNET EXPLORER

Surf engine Alexa 2.0 can now work with Microsoft's Internet Explorer 4.0 browser via a 45K JavaScript application. The new software loads like a web page and installs in under a minute, according to Alexa Internet president and CEO Brewster Kahle. Web users then carry on as usual.

Alexa appears in a frame at the bottom of their browser, feeding them stats and information about the pages they are visiting, suggesting related links and offering lost files from its archives. "We're the only Out-Of-Print web server!" says Kahle. "We're not like a portal site," he explains, "we're for when you find yourself out of the block, asking yourself: Am I where I want to be?" He says he wants to raise the web from a medium to a literature. Some of Alexa's fans have been similarly high-falutin' in their praise, Feedmag's Steven Johnson writing that:

"Shifts like these can seem minor when you first encounter them, but if other software designers begin to emulate them, they could have a profound effect on the larger web ecology."

The IE announcement, though, is less about paradigm shifts than it is about browser wars. Alexa's related links are also available through Netscape's Navigator browser (CI No 3,422), but Kahle emphasises that: "IE has the full-featured Alexa. We find it a much better integration." Alexa's site stats are derived from its massive 12 Terabyte archive of web sites and usage patterns. That infrastructure is funded by advertising, and as Kahle points out: "We can do very targeted ads."

Advertisers love it because they can advertise more or less on the competitor's site. It benefits users too because hey, you want to know what else is out there, right?" After two years in business Alexa remains privately held, with a staff head count of 35. The name is short for the Library of Alexandria, and we all know how that ended. "Yeah, but it lasted 500 years," Kahle chuckles. "If we can last 500 years, that'll be fine."

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JULY

JULY



## Alexa 2.0 for Explorer 4 Released

*From The Search Engine Report  
July 1, 1998*

When I last reviewed *Alexa*, I found it a remarkable product. The latest release for Internet Explorer 4 makes it even easier to begin using this useful tool.

The first advantage is the incredibly small size: 45K. It takes longer to load some web pages than this program, which previously was a 900K download.

The second plus is that the *Alexa* toolbar now floats within the main browser window, at the bottom of the screen. This makes it far more useable than when it floated outside the browser.

From the toolbar, you can continue to select from the main *Alexa* options, slightly renamed from the older version. "Stats" provides interesting statistics about the web page you are viewing. "Links" suggests web sites with content similar to the page you are viewing.

Selecting either of these causes a new pane to open in the browser, to the left of the page displayed. The pane conveniently displays stats or link information.

About the only drawback is for those who like to open multiple windows. If you turn *Alexa* off during a session, then open a new window, the *Alexa* toolbar returns. You must close it again in each new window. This is annoying for me, because I constantly open new windows. For others, it may not be a problem. A fix is promised for the future.

*Alexa* 1.4 remains available for those using Netscape browsers or Internet Explorer 3.

**Alexa 2.0 for IE4**  
<http://www.alexa.com/ie4/>

**Alexa 1.4**  
<http://www.alexa.com/download/>

**Alexa: Searching Serendipity And More**  
*The Search Engine Report, Jan. 9, 1998*  
<http://searchenginewatch.com/sereport/9801-alexa.html>

A longer review about *Alexa*, discussion in detail how the tool works.

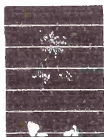




## POWER USER

John McCormick

## Here's where to find the best ways to find anything on the Web



Faster Internet connections make a difference for serious Web searches, but software helpers can do better and are easier to acquire and install than, say, an Imagined Services Digital Network link.

If you have to wait forever to get to hot links, try a browser accelerator. These handy utilities store locally the pages you most recently visited, but their best feature is preloading pages.

Browser accelerators copy to your PC's hard drive or memory the pages for links on a Web page while you're still reading it. How much of a boost you get depends on how fast you read, how many links the page has, and whether the software downloads the link you want before or after you click on it.

### A go-between

Most accelerators operate as proxy servers, inserting themselves between your Microsoft Windows browser and the Internet. You might shudder at the thought of adding yet another software layer, and with good reason. Proxy servers introduce new bugs, require configuration and support, and might make your system crash more often.

Even so, Go Ahead Got It from Go Ahead Software Inc. of Redmond, Wash., is a nonproxy-server accelerator with lots of performance-enhancing features. Read about it at <http://www.goahead.com>.

Go Ahead Got It preloads pages you visit frequently as well as other pages you specify. More importantly, it lets you know when such a page has changed. Other accelerators just speed up your views of old data.

My favorite search engine is Yahoo, but others have different strengths. Alta-Vista, Lycos, WebCrawler, Excite and Infoseek are general search engines, and there are country- and topic-specific search sites, too.

For serious research, try <http://www.inteluth.com/>. The Internet Sleuth site lets you search general search sites simultaneously or choose among 3,000 others.

This one site has thousands of categories, each of which can connect to multiple databases.

For example, the Arts & Humanities category covers architecture, art, genealogy, history, humanities, literature, performing arts and subcategories.

Under government, there are far too many agencies and categories to list, each letting you search multiple databases simultaneously.

Perhaps you're a beginner and can't decide where to enter or how to get

see **POWER USER** Page 48



## Alternatives to Explorer, Navigator Work for beginners, experts alike

### POWER USER from Page 46

around once you're on the Web. There are easier alternatives to the ubiquitous Microsoft Internet Explorer and Netscape Navigator browsers, but you will need to use one of them at least once to download an alternative browser unless you can talk someone else into doing it for you.

Check out <http://www.neoplanet.com> for NeoPlanet, a full-blown alternative perfect for novice or occasional users. NeoPlanet isn't a true browser, it simply puts a new interface on Internet Explorer to hide the most frustrating aspects.

Agency administrators who load NeoPlanet on their new users' PCs will spend a lot less time in support and training.

Another alternative Web navigator suitable for intermediate or advanced users is Alexa, at <http://www.alexa.com>. Instead of replacing the Explorer interface, Alexa's tool bar gives more detailed information about sites gleaned from Alexa's database.

It has an online encyclopedia, dictionary,

thesaurus and a tool to help users reach "404 Not Found" sites they can't reach in the normal way.

The last feature relies on Alexa's archive of more than 500,000 Web sites. It isn't infallible, but often a desired page is only temporarily unavailable because a server went down or the periodic site-locator upload file left it out.

Sometimes a site no longer exists, of course, but all the user wants is to read some information from the first screen. In both cases, the Alexa Archive can be a lifesaver. The tool bar takes up screen room, but you can collapse it or close it selectively.

Even if you must download the 1.6M ALEXASETUP14N.EXE file over a slow dial-up connection, the utility is worth 10 minutes to install for serious surfing. ■

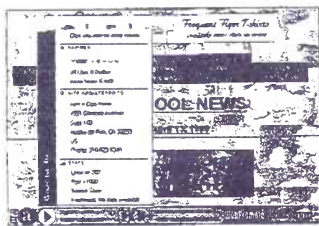
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Find It **ONLINE**

# Share The Wares

**S**ome of the best apples in the online orchard are the free (or free to try) programs available for download. Each month we'll feature highlights from our pickings.



Alexa provides the inside scoop on the sites you visit.

**Alexa.** This freeware program is best described as a browser enhancer. After you download (<http://www.alexa.com>) and install the software (which works with Win95 or NT, and both Netscape Navigator and Microsoft Internet Explorer), a floating bar hangs around to provide additional information about the sites you visit.

This bar can tell you how fast a site's connection is, how often it's updated, and what other Alexa users thought of it. You also can cast a vote about a favorite site (or one you can't stand). Alexa houses a variety of cached, or temporarily stored, Web pages, so if a popular page is busy, Alexa can reroute you to its stored copy.

Alexa also features a one-on-one chat service that lets you conduct real-time conversations with other users. If you're looking to super-charge your browser, this free software makes an excellent addition.

**Wordware.** If it's performance-enhancing products you seek, try AMF Software's Wordware. This shareware add-on turns Microsoft Word into a fully functioning personal information manager. With versions available for Word 6.0, Word 7.0, and Word 97 (and systems running at least Windows 3.x), you can access all your contacts, organize and protect your documents, and even play audio CDs from the Word toolbar.

Wordware also expands Word's Internet capabilities, letting you manage all your Web site addresses and bookmarks from within the word processor. We'd like to avoid sounding like an infomercial, but there's more! Wordware also automates Word's faxing abilities, lets you create business cards, and provides project management.

The software is free to try (from <http://www.amfsoftware.com/word/wordware.html>), but it must be registered for \$39.95 for continued use.

## Quick Fixes

**M**ost of today's software can benefit from a few updates, patches, and add-ons downloaded from the Internet. This month we focus on Dial-up Networking (DUN), the common Internet connection utility.

### DUN Upgrade 1.2

If you're using an Internet service provider (ISP) for your Net connection and Windows 95 (Win95) as your operating system, you're most likely using DUN as your connection tool. A few updates out there will enhance DUN's abilities. The DUN upgrade 1.2 improves the interface and gives you hands-free dialing. (NOTE: You don't need this upgrade if you're already running Win95b.)

<http://backoffice.microsoft.com/download/moreinfo/win95netp.asp>

### Windows Socket Update

The Windows Socket Update 2.0 improves DUN's ability to use Transmission Control Protocol/Internet Protocol (TCP/IP, the standard Internet protocol that lets computers communicate) and resolves several performance issues with the Microsoft Internet Explorer 4.0 World Wide Web browser.

<http://www.download.com/PC.Result/TitleDetail/0,4,0-45786,501000.html> for search for "windows socket update" at <http://www.download.com>.

## Try It Online

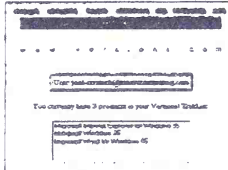
**T**he World Wide Web is about more than just data; it offers a chance to get involved and interact online. Check here for sites that let you get the most from the Web.

### Versions

<http://www.versions.com>

The Versions Web site can help you keep track of the software installed on your system. Sign up for free E-mail updates about the programs that most interest you. You just enter your E-mail address and follow steps to enter your operating system and a variety of software categories (such as Utilities or Graphics) you use. Versions promises not to send any junk E-mail, so you'll receive only the message about updates, and you can cancel any time.

You'll receive notification every time a new release or update is available in your categories. With the free Basic service, you'll also be able to select three specific products that Versions will track for you. The extended service



The Versions Web site will keep track of the updates available for software you own.

costs \$18 a year, but if you purchase an item from the Cirrus Online Store ([http://www.paragalactic.com/store\\_home/7.html](http://www.paragalactic.com/store_home/7.html)), you'll get the extended service free.

You also can search for specific products at the Versions site. The database contains more than 50,000 products. Just enter a name and click Search. ■



Saying a PC Online  
Computer Buyer's Guide +  
Handbook

New York, NY

July, 1998

by David Drucker

**A**s we creep closer to the millenium in that technology showcase a.k.a. these United States, we're moving steadily closer to the world vision of E. M. Forster in his 1909 epic, *The Machine Stops*.

In Forster's forecast, we all inhabit individual hexagonal cells, which we rarely leave, dependent as we are upon The Machine for our food, communications, and spiritual comfort. Each cell is outfitted with telephone equipment and an "optic plate," analogous to a computer monitor. Most human interaction takes place via a global web that's part of the Machine, and people rarely meet face to face.

It sounds very much like the life of today's Netizen. Hungry? Order a pizza online. Lonesome? Enter a chat room and find companionship. Want to buy something? You can purchase almost anything from your friendly, neighborhood Webmerchant without leaving your home.

We're not yet prepared to endorse an Internet-centric way of life, but it would be folly to deny the Web's impact on one of life's most mundane chores—shopping. Although the continuing proliferation of megastores and mini-malls would seem to indicate otherwise, conventional storefront retailing is under assault.

You can buy it direct from a Dell, or from a manufacturer, a retailer, or a CPA in Kalamazoo.

If you address such consumer concerns as warranties, return policies, shipping, and support, you should emerge that happiest of online creatures—the satisfied buyer.

## A Little History

This phenomenon began with mail-order catalogs, the roots of which go back more than a century to companies like Sears Roebuck. Mail-order companies made the goods of the world available to everyone, no matter where they lived. As we became used to the convenience of shopping from (as the ads say) the comfort of our homes, it was only natural that catalogs were joined by television.

First it was infomercials, then round-the-clock home-shopping channels, and then came the Internet, which from a consumer standpoint is as ideal a shopping medium as anyone could imagine.

With time-constrained printed catalogs and television, you have to wait until the right message arrives and, as the pitchmen say, "Act now." Shopping on the Internet, by contrast, puts you, the buyer, in the driver's seat. Granted, banner advertising is part-and-parcel of today's Web-surfing experience, but someone looking for a specific product or product type, be it a basket of fruit or a Caterpillar D4-bulldozer, controls the process.

If you're looking for apples or earthmovers, this article won't provide much product-specific advice. But in your search for computer equipment, the Internet is a good place to look, and we can point you in the right direction.

Going online to buy a PC is a broad enough goal to provide several avenues of approach. We'll discuss the various alternatives, and see what each has to offer. First, it's worth noting the wonderful irony inherent in the entire concept. To buy a computer online, you must first have access to a computer. Actually, this is a blessing in disguise, ensuring that those who use the Internet as a purchasing tool have enough basic computer knowledge and experience to make an educated choice.

Based on that assumption, the primary question then be-



# BUYING A PC ONLINE

comes which of the myriad possible online vendors, and even vendor types, to choose. Your choice will depend on the type of computer you want, the level of pre- and post-sale support you will require, and various financial considerations. These include payment method, refund potential, and security considerations. We'll discuss all of those factors, and more.

## Who's Selling Online?

The more salient question might be, "Who's *not* selling online?" The answer, "Hardly anyone." We have three primary online retail channels. The first consists of direct-to-consumer manufacturers, typified by companies like Dell and Gateway.

Most of the products sold by these vendors bear the companies' own logos. The exceptions are generally limited to peripherals—printers, scanners, software, etc.—that help to facilitate the one-stop-shopping experience.

Some direct manufacturers rely upon online and mail/phone ordering as their means of distribution. Others employ them as two of several channels, which may also include conventional dealers and corporate-level sales reps.

The second channel is made up of retailers whose online operations are established by original catalog houses like ~~Macys~~ ~~Montgomery Ward~~ and Montgomery Ward. Like those pioneers, they offer a wide range of merchandise originating from numerous manufacturers; the larger retailers might also offer proprietary systems.

Some online retailers have added an Internet presence to an existing business that might include catalog and/or storefront operations. Others exist solely on the Internet. In at least one instance—~~Egghead Software~~—the tremendous success of the company's online operation contributed to the decision to abandon its storefront arena entirely.

Neither of these conventional channels is necessarily limited to conventional buying protocols. While the majority of sales are likely to be brand-new merchandise, with a non-negotiable price determined by the vendor, that's not the only transaction you can expect to find. Many vendors, and even some manufacturers, offer refurbished equipment at a discount; some vendors even allow the buyer to set the price—sort of—by setting up online auctions of surplus merchandise. We'll consider some of

these alternatives later, but first, let's take a look at the third channel.

Computer users on the cutting edge—who replace their systems as often as they can find a reasonable excuse—are often in the interesting position of having too much equipment. In the past, people with something to sell might tack notices to bulletin boards about town or advertise in their local paper.

The advent of the Internet hasn't rendered such tactics obsolete, but many savvy traders have begun to take advantage of its ability to reach large numbers of potential buyers very quickly. In turn, savvy entrepreneurs have established online auctions, with (mostly) private parties offering single items to (mostly) other private parties. The success of these ventures has, in turn, inspired the creation of sites where the buyer deals directly with the online auction house.

## The Manufacturer-to-You Channel

Companies that manufacture their own systems are in an ideal position to customize machines to meet the needs of each customer. Thus, if you want a Pentium II system with a huge hard disk, but don't much care about high-end video or, indeed, multimedia at all, buying directly from the manufacturer makes a great deal of sense.

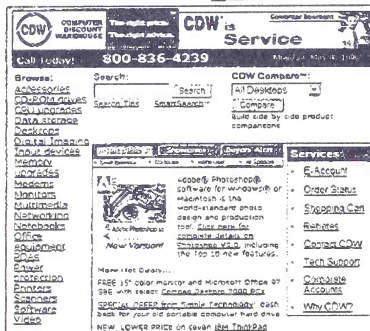
Until the advent of the Internet, playing the "what-if?" game—determining what impact various configuration options would have on the price of a system—was a time-consuming process. The best of the online sites have changed that situation dramatically.

Today, the savvy consumer can start with a basic platform—a 333-MHz Pentium II, for example—and using drop-down menus, can choose from various options in several different component categories.

The price impact of each choice is often listed right on the menu, so you can see how much more or less a faster or slower processor will cost. Once the desired configuration is selected, clicking on a "calculate price" button will return a page that lists your personally configured system and its selling price. If you've added a few too many options and that price turns out to be a bit more than you expected, the process can be repeated *ad infinitum* until the price and the system are exactly what you want.

Of course, it might very well be that a preconfigured system is ideal for your needs. Being open to that possibility increases the field of manufacturers from which to choose, as not all of them offer built-to-order systems.

An off-the-shelf model might also save you a few bucks. Fixed configurations allow a manufacturer to take advantage of economies of scale, which can reduce a system's cost by a worthwhile amount. The other side of that same coin also works to the consumer's advantage. If a manufacturer overestimates demand for a given system, his resulting overstock is likely to be sharply discounted to move it out quickly. Such systems are sometimes offered as "Internet Specials," although we suspect that a phone-in customer would often be given the



**Computer Discount Warehouse (CDW) is among the best of the online retailers when it comes to service and support, with areas for downloading drivers, online documentation for troubleshooting, and links to manufacturers' sites.**

# BUYING A PC ONLINE

same opportunity for savings.

Many of the better manufacturer-sponsored sites offer far more than simply a place to buy a computer. Some provide comprehensive support facilities, with FAQ (Frequently Asked Question) files, interactive troubleshooting systems, downloadable files and documents, and more. Since you may have an ongoing relationship with the company that sells you a computer, it makes sense to base some of the purchasing decision on the ease with which you can maintain that relationship. Granted, some computer users will always prefer the warm-and-fuzzy aspect of person-to-person tech support. Others might welcome the opportunity to seek out a quick answer on the company's Web site.

To recap, within the manufacturer-to-you channel, you'll find three distinct types of basic transaction: custom configuration, off-the-shelf, and closeout. In the first two instances, difference in warranty and service policies are unlikely. A deeply discounted closeout, however, might carry a shorter warranty. However, this isn't necessarily so. We've encountered manufacturer closeouts that offered an extended warranty to sweeten the deal.

Earlier on, we mentioned Dell and Gateway as being typical of the companies that sell direct to the consumer. In fact, they're not typical, but they could be templates for any company wishing to set up an online store. We say this not because either company does any single thing so well, but because they offer an excellent combination of comprehensive content and ease of use. Beyond that, both companies had established reputations as direct merchants before the advent of online commerce. They simply extended their policies to encompass the new channel.

While Dell and Gateway are two of the most established and reputable online vendors, they're by no means the only game in town, or even the only type of game. Many smaller manufacturers maintain online stores, and if these sites aren't as elaborate as those of the major players, they still provide ample opportunity for

you to secure good products at attractive prices.

Nor should you overlook large, well-established manufacturers that traditionally have sold goods through more conventional channels, such as storefront dealers and catalog houses. Compaq and NEC are examples. They, too, have begun to test the online/direct waters, and they are finding them inviting. So, when setting out to compare manufacturers' wares, by all means log onto the sites of the obvious choices; just be sure to cast your net wide enough to encompass some of the less conspicuous alternatives. You might be pleasantly surprised.

To find a manufacturer's Web site, the first step is simply flank the company name with "http://www." to the left and ".com" to the right—though Web browsers allow you to dispense with the "http://"

part of an address. Thus, Dell and Gateway will be found at <http://www.dell.com> and <http://www.gateway.com>, respectively. Any company not accessible by that expedient may readily be tracked down using any of the many splendid Internet search engines, such as Yahoo (<http://www.yahoo.com>), Alta Vista (<http://www.altavista.digital.com>), and InfoSeek (<http://www.infoseek.com>).



Like its televised counterpart, the Home Shopping Network, the Internet Shopping Network offers a wide range of products at discount prices. ISN also offers themed specials, though it is less frenetic than the TV version.

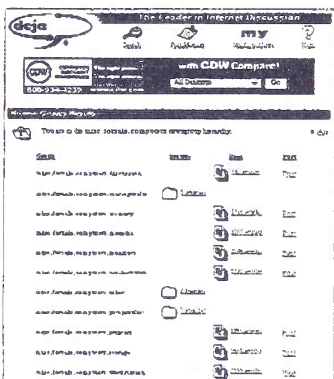
## The Virtual Mall

The American penchant for browsing through a catalog and placing an order goes back more than 100 years. Of the several pounds of catalogs that you probably receive each month, a good percentage is likely to come from one of the many computer merchants that have made life so tough for the mom-and-pop byte shops.

Mail-order houses—such as CDW, The PC Zone, PC Connection, and MicroWare-house, to name just those whose catalogs arrived in our offices today—feature systems, peripherals, accessories, et al from a broad selection of manufacturers. As such, they are the stay-at-home analog of so-called superstores like CompUSA.

Like CompUSA, many of these catalog houses have extended their scope to encompass the Internet. Indeed, all four of the companies we just mentioned maintain enormous Web sites at <http://www.cdw.com>, <http://www.pczon.com>, <http://www.pcconnection.com>, and <http://www.warehouse.com>, respectively.

In addition to the many catalog-cum-online merchants, the Virtual Mall includes several online-only companies. Among the better-known names in this category are the Internet Shopping Network (ISN) and NECX, found at <http://www.isn.com> and <http://www.necx.com>. ISN is a part of the vast Home



To find out what other consumers think of a particular manufacturer or retail outlet's service and products, visit the archived newsgroups at [Deja News](http://www.dejanews.com), a searchable database of Usenet topics.



# BUYING A PC ONLINE

Shopping Network family. It differs from its TV-based cousin in that the products offered via the Internet are described in more detail, and are offered without any "Better ring in soon, before we run out" hoopla.

The retail division of NECX, called The Home & Office Computer Center, is described by the company as "the world's most comprehensive online source for computer products, featuring over 30,000 products—every one of them available online."

NECX is interesting for its strong consumer orientation. It features full-color product photos, comprehensive descriptions and specifications, product reviews containing both positive and negative comments (including those from customers), and side-by-side comparisons of competing products. It also quotes the prices asked by competing vendors for the same products, even if the price happens to be lower than NECX is asking.

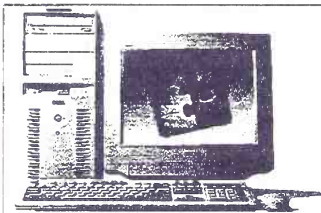
In addition to its first-line channel, NECX operates an Outlet Center where you can find even greater bargains. The products offered in the Outlet Center are end-of-life models, open-box units, demonstration models, and other exceptional deals that the company's buyers have been able to obtain. We found, by way of example, an open-box Digital HiNote 735 laptop, with a 233-MHz MMX Pentium processor, 32MB of RAM, a 4GB hard drive, a 20X CD-ROM, and a 13.3-inch XGA TFT screen selling for \$2,299.

## That Nebulous Third Channel

Let's say your next-door neighbor was about to buy his kid a new computer as a back-to-school present, and he offered you the old one—maybe a 200-MHz Pentium—at a rock-bottom price. You'd probably leap on it with claws fully extended. That's because nothing is inherently wrong with one person selling a product to another. Taken a step further, you might answer a classified ad in the paper, drive to the other side of town, and participate in a similar transaction with a stranger.

Now, let's suppose that the same stranger lives halfway across the country, and will sell that computer to you if you're the highest bidder in an auction that takes place online, over the course of several days. That's the premise behind Ebay's Web-based auction, billed as "the leading person-to-person auction community on the Web." Since its inception, Ebay has served as a medium for thousands of one-on-one sales, and in the main, the participants seem to be a happy bunch.

The Ebay auction house is divided into several categories, and a reasonably powerful search engine makes it possible to find the type



**You can buy this Dell system configured any way you want at the company's site. The interface allows you to quickly see how the final price will be affected by the addition of a bigger monitor, more RAM, or a faster modem.**

## Protect Yourself

The idea of clicking an onscreen button and thereby authorizing a stranger to extract hundreds—or thousands—of dollars from your credit card can be daunting. But having done so on multiple occasions, we can offer a few simple guidelines to make that process somewhat less frightening, and can help you to gather enough information to enter into an online transaction with confidence.

- Try to deal with vendors who have been recommended by people you know and/or trust. If your neighbor or colleague has had good service from Computers 'R' Us, it's likely that you will, too.
- If you can't get a personal recommendation, go online and lurk in some of the newsgroups related to the product you're interested in. You can even post a query in those groups, and look for feedback.
- The AltaVista search engine can search Usenet as well as the Web, if you feel like searching from one place. Enter a few key words and it's probable that you'll find messages that will help you narrow down the field.
- Print all of the pages relevant to your purchase, and keep them in a file with the rest of the papers related to the sale. In case there are any disagreements about return policies, missing items, warranty, or any other aspect of the transaction, have hard documentation to back up any claims.

Always use a major credit card when making online (or any direct) purchases. It offers proof of purchase and the credit-card company should back you up in the event of a dispute with the vendor.

Don't send your credit card information via a site that's not secure. Both Netscape Navigator and Microsoft Internet Explorer support SSL transactions, and there's no reason to patronize a vendor who doesn't offer that protection.

Take advantage of ratings services like Bizrate (ap. cit) and the U.S. Consumer Protection Agency (<http://usconsumerprotectionag.org/services.htm>). The latter investigates online fraud, and provides information to the consumer about companies to avoid. □

of product desired. Each is listed on its own page, with a description provided by the seller. Creative sellers often include pictures with the description, along with links to (for example) the manufacturer's site.

Each item's page also includes links that bring up a listing of the seller's other auctions, reveals any comments buyers have made about that seller, and allows a potential buyer to send an e-mail to the seller. While many of the sellers are individuals, others are dealers who find that the auction is an easy way to reach a large potential customer base.

Aside from taking a very small piece of the action, Ebay doesn't get involved in the transaction. Once a successful final bid has been entered, it's up to the buyer and seller to make contact and complete the transaction. On the face of it, this sounds like a path fraught with peril for the buyer. Therefore, it's up to the buyer to determine how real that peril is, and deal with it. One way is to see if the seller has inspired complaints from previous customers. The Ebay auction can be found at <http://pages.ebay.com/aw/index.html>.

## Price Isn't Everything

When "auditioning" an online retailer, the product's price is only one factor that should influence your decision.



# BUYING A PC ONLINE

ber to complete the transaction.

Fraud isn't the only possible pitfall with credit cards. Although major players rarely do it, a vendor may charge your card the day you place the order, even if the item isn't in stock and won't ship for several weeks. In effect, this is an interest-free loan to the vendor, who probably won't even bother to thank you for the use of your money.

Still, with all of the real or imagined potential for credit-based problems, it remains by far the best way to handle online purchases at the personal level. As long as you use a major credit card to make your purchase, the credit-card company will initially be on your side in the event of a disputed charge. Depending on the dispute's nature, you might have to jump through a minor hoop or two, but if your complaint is even moderately justified, the credit-card company will intervene on your behalf.

## Finding the Good Guys

Time was, a customer who felt mistreated by a retailer might write an indignant letter to the Better Business Bureau. The Bureau, for its part, would keep a record of these complaints. Someone considering the purchase of a widget from Main Street Widgets could call the BBB and ask whether that company's record merited their patronage. The notion of finding out how well a business has treated its previous customers has made the transition into the online community, and it still works. Post a question about a given vendor on the appropriate Usenet newsgroup and you're almost certain to get a response—or several. A good way to find a particular newsgroup is to perform a search at <http://www.dejanews.com>.

A more organized system of rating online vendors is provided by Binary Compass Enterprises, which provides vendors and consumers with a free service called BizRate. When a vendor signs on with BizRate, its online customers can respond to a questionnaire once they've made a purchase. The survey covers ten dimensions of customer service—price, product selection, product information, Web-site navigation, aesthetics, product availability, on-time delivery, customer support, return policies, and customer loyalty. (Some factors assume experience with that ven-

dor, but that's covered in the questions' wording.)

The tabulated results of these surveys are posted at the BizRate Web site (<http://www.bizrate.com>) for all to see. In addition to simply asking questions and reporting the answers, BizRate's staff visits and shops on the sites of its subscribing merchants to confirm continuity of quality. The BizRate Guide currently rates more than 350 online merchants, and has plans to expand that roster considerably.

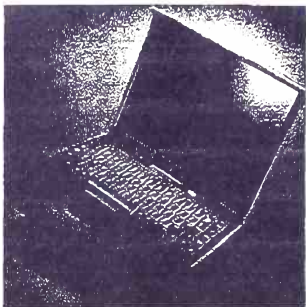
Another potentially useful, user-based rating service is part of a program called Alexa. Available as a free download (<http://www.alexa.com>), it runs concurrently with either Netscape Navigator or Microsoft Internet Explorer. Each time you log onto a site, the Alexa information bar provides data about that site. The data's nature and quantity will depend upon the site being visited, but it can include any publicly available reviews and rating, whether it's been endorsed for electronic commerce, and how well other Alexa users like it.

This last bit is determined by simply tabulating the like/don't like votes that users cast while at the site, so it's not necessarily a scientific sampling. Still, if 300 Web-surfers voted "Nay" and only 50 clicked on "Yea," there might be a reason. Beyond information about the current site, Alexa provides where-to-go-next advice. If you're at one retailer's site, Alexa will provide links to other sites that sell similar merchandise.

## Summing Up

Buying a computer online is much the same as buying one from a store or a printed catalog. You have to strike the best balance among factors like price, product, convenience, service, and security, and with all of those factors in mind, make a choice.

If you're uncomfortable with the notion of transactions that don't end with the product on its way home in the trunk of your car, then online shopping isn't for you. Nor, for that matter, is ordering from a catalog. But if you want the widest possible selection and the greatest number of options, shopping online is like having a mile-high stack of catalogs, with no worry about overloading the recycling bin. As long as you take modest precautions, and make certain to read all of the proverbial fine print before pressing the Order Now button, your online purchase can be as satisfying as any that involves the car or the telephone.



**We found this open-box Digital HiNote 735 at the NECX Outlet Center for well below the retail price. The Outlet Center also sells demonstration units, end-of-life models, and other rock-bottom deals.**

**The BizRate Guide** Major sites with a rating: Barnes & Noble, Books, Price To Go, Name, Top 25, First Time's, About, About, Merchant's Corner, Help, Feedback

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<b>VIDEO GAMES</b> Action, adventure, and more	<b>CD-ROMS &amp; MUSIC</b> Music, software, and more	<b>HARDWARE &amp; SOFTWARE</b> Operating systems, utilities, and more	<b>SCANNERS &amp; FAXES</b> Flatbed, handheld, and more

**BizRate from Binary Compass Enterprises is a helpful tool for both vendors and consumers. The free service surveys customers after they've bought products and ranks companies based upon the responses in a variety of categories.**



# Calendar

## July

26-30 Madison, Wisconsin (Monument Terrace). **The Fifteenth Annual Conference on Artificial Intelligence (AAAI-98)** and the **Tenth Conference on Innovative Applications of Artificial Intelligence (IAAI-98)**, sponsored by the American Association for Artificial Intelligence, features presentations on such topics as "Structured Probabilistic Models: Bayesian Networks and Beyond," "Experiments in Musical Intelligence," and "Modeling Satisfaction and Satisfiability Modeling: Modeling Problems as Constraint Engines Can Solve Them." The AAAI-98 Exhibition will span 3 days and will comprise a host of events designed to showcase current products, research, and applications in AI. Also, the AAAI Tutorial Forum features 16-hour tutorials that provide an opportunity for researchers to spend 2 days freely exploring advances in disciplines outside their normal focuses.

Contact: AAAI-98/IAAI-98, 445 Burgess Drive, Menlo Park, CA 94025-3442, 650/328-3123, Fax: 650/321-4457, <http://www.aaai.org>.

## August

26-28 Arlington, Virginia (Crystal Gateway Marriott Hotel). **Interactive Multimedia '98**, sponsored by the Society for Applied Learning Technology (SALT), will focus on topics such as telecommunications and distance learning, Internet applications, interactive instructional materials development, legal issues in multimedia programs, industrial and management training, developing and implementing Web-based instructional systems, electronic performance support systems, health-care sciences, innovative technology for multimedia distance learning systems, and public and university education.

Contact: SALT, 50 Culpeper Street, Warrenton, VA 20186, 540/347-0055, Fax: 540/349-3169, [program@salt.org](mailto:program@salt.org).

30-September 1, Santa Barbara, California (Pess Parker's Doubletree Resort). **DVD PRO: Making It Happen**, sponsored by *E-Media Professional* (<http://www.econworld.com>) magazine and Online, Inc., is a follow-up conference to the first DVD Professional Conference held this past February. According to the company, "Making It Happen" is a conference theme that means more than technology updates on tools and services to make DVD titles. DVD PRO is about new methods and techniques for creating DVD content. It's about distribution strategies, licensing issues, delivery platforms, repurposing content, and data storage transitions. It's about DVD capabilities, challenges, and markets. The conference is geared for developers, pub-

lishers, executives, and corporate end users who need to know how to adopt DVD. DVD PRO is adding numerous single-speaker seminars on content development and creative applications of DVD technology.

Contact: Online, Inc., Wilton, CT, 203/761-1466, <http://www.onlineinc.com/dvdpro>.

## September

1-3, Boston (Hynes Convention Center). **eBusiness World**, an all-new event presented by DCI and billed as a refocused Internet Expo, promises to give attendees the technology, tools, and expert guidance needed to get their companies up to speed in the competitive, fast-changing new electronic marketplace. Topics to be covered include security, collaboration, messaging, e-commerce payments, supply-chain management, sales force, data warehousing, and customer relations. The event is organized into six core conference tracks within two focused programs. The Business Visions Program consists of best practices in e-commerce, developing intranet/extranet that work, and Web-enabled supply-chain automation. The Technical Implementation Program consists of security: enabling e-business today and tomorrow, Web-enabled application development for the enterprise, and Internet application architecture. Contact: eBusiness World, 204 Andover Street, Andover, MA 01810, 978/470-3880, Fax: 978/470-0526, [ConReg@dciconf.com](mailto:ConReg@dciconf.com), <http://www.dci.com/eBusiness>.

10-11, Washington, DC (Washington Convention Center). **NetExpo Washington '98** will cover a wide variety of industry issues, from Web site design to e-commerce. The theme of the expo is "See What's New at NEW '98." Exhibitors will include Internet service providers, online services, content providers, Web page developers, hardware and software suppliers, and other regional and national firms offering Internet-related services.

The event will be held with the 15th annual MultiCom Communications Expo and Conference for publishing and graphics professionals. Additional details and information on how to register for the exhibits and seminars are available at the show's Web site at <http://www.NEWexpo.com>.

Contact: Geoff Lindsay, Lindsay Communications Group, 2032 Virginia Avenue, McLean, VA 22101-4940, 703/536-2100, Fax: 703/536-2101, [lindsay@MulticomExpo.com](mailto:lindsay@MulticomExpo.com).

16-18, Atlanta (Ritz-Carlton Hotel, Buckhead). **The 1998 Annual Conference and Workshops of the Association for Global Strategic Information**, sponsored by Infohorics Ltd, focuses on managing new technology, tools, techniques,

and tactics in today's competitive intelligence and strategic information arenas. Session topics include adapting CI and SI to the new knowledge environment, collecting the data: information sources, collecting the data: an array of new software tools, and personalizing and analyzing the data.

Contact: Infohorics Ltd, 15 Market Place, Tebury, Olos OL8 8DD, U.K., 011-44-1666-505-772, Fax: 011-44-1666-505-774, [contact@infohorics.com](mailto:contact@infohorics.com), <http://www.infohorics.com>.

21-24, Denver (Colorado Convention Center). **Electronic Commerce World 1998** promises to educate current and potential users of electronic commerce technology. Its theme is "Business Solutions through Technology Integration." The conference will offer 70 educational sessions, industry-leading keynote speakers, full-day preconference workshops, problem-solving roundtables, and an exhibit hall. Some of the topics to be covered include automated data capture; electronic data interchange, electronic catalogs, financial electronic commerce; intranet/extranet; document management, imaging, and workflow; enterprise resource planning; business-to-business; electronic commerce; global electronic commerce; security; and Internet and Web-based EDI. Contact: Electronic Commerce World, 2021 Coolidge Street, Hollywood, FL 33020-2400, 888/ECOM-711, 954/925-5900, Fax: 954/925-7533, <http://www.econworld.com>.

## October

12-14, Washington, DC (Washington Hilton & Towers). **Online World**, sponsored by Online, Inc., is a national conference about how to find and use Internet content and services. According to the announcement, librarians, Internet researchers, managers, information professionals, and others attend the conference to hear respected speakers share their hard-won expertise. This year's keynote speaker will be Brewster Kahle of Alexa Internet. The conference will offer dozens of sessions in six full tracks covering topics including practical searching, Internet development, trends and technologies, and resource management.

Contact: Online, Inc., 462 Danbury Road, Wilton, CT 06897-2128, 800/248-8465, Fax: 203/761-1444, [info@onlineinc.com](mailto:info@onlineinc.com), <http://www.onlineinc.com>.

26-29, Pittsburgh (Pittsburgh Hilton). **The ASIS 1998 Annual Conference** will examine information access and what it means in a global economy. The topics that will be discussed include the following: Who will be the information producers of tomorrow? What will be the effects of the lack of quality control exercised by traditional publishers? What

are the social effects of global information access?

A plenary session will be given by Hal R. Varian, dean of the School of Information Management and Systems at the University of California-Berkeley. His recent work has been concerned with the economics of information technology and the information economy.

Panel session topics include "Advances in Social and Organizational Informatics: Implications for Information Science," "Intellectual Property Hearings," "Theories of Information Science," "Intellectual Property: An Oxymoron?" and "Accessing Full Text: Integrating Electronic Resources (SIG LAM)." Contact: American Society for Information Science, 8720 Georgia Avenue Suite 201, Silver Spring, MD 20910, 301/495-0900, [asis@asis.org](mailto:asis@asis.org), <http://www.asis.org>.

## November

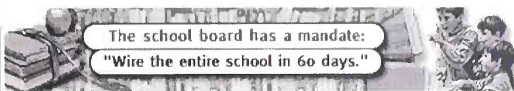
1-5, Monterey, California (Monterey Conference Center, Doubletree & Marriott Hotels). **Internet Librarian '98** is a mixture of leading-edge ideas and tools as well as exciting new services—all focused on information professionals and Internet-related technologies. It features over 100 dynamic speakers in three simultaneous tracks each day, plus 24 workshops, two evening sessions, and the new Internet@Schools '98 conference. According to the announcement, Internet Librarian '98 covers metadata and Web tools; online and the Net; Internet and intranet content; creating Web sites; intranet case studies; managing knowledge assets; training and instruction; virtual services; digitizing resources; infrastructure; Web management; Net trends; and more. Session track topics include metadata, content, learning, searching, Web sites, transitioning, and virtual services. The exhibition hall will feature over 80 booths offering visitors a choice of products covering aspects of Internet, intranet, and library technology.

Contact: Information Today, Inc., 143 Old Madison Pike, Medford, NJ 08055-8750, 609/654-6266, Fax: 609/654-4309, [clibrary@infotoday.com](mailto:clibrary@infotoday.com), <http://www.infotoday.com>.

8-10, Washington, DC (Willard InterContinental Hotel). **39th Anniversary Information Industry Association Annual Conference** will aim to open a window on the industry's future. This year's theme is "Redefining Content—Partners and Profits in the New Millennium."

Contact: Information Industry Association, Meetings Department, 1625 Massachusetts Avenue NW, Suite 700, Washington, DC 20036, 202/986-0280, Fax: 202/638-4043, [ming@infoindustry.org](mailto:ming@infoindustry.org), <http://www.iiainet.com>.





Alexa stats  
now on IE 4

**NEWS.COM** TECH  
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FIRST

*Beth Lipton*

CNET NEWS.COM

Microsoft is keeping up with the Joneses at Netscape Communications today, adding updated technology from [Alexa Internet](#) to its Internet Explorer browser.

Alexa Internet's technology, which it calls a "surf engine," is installed into a user's browser and provides site statistics and related sites wherever she or he goes on the Web. The goal is to aid the surfer in doing research or comparison shopping, for example, the firm said.

The new technology, Alexa 2.0 for IE 4.0, loads like to a Web page and can be installed in less than a minute, according to Alexa Internet. The 45K application is installed with the click of a mouse; there are no download and install procedures. Alexa 2.0 appears in the browser frame as a toolbar and displays information about the sites a user visits in the IE sidebar.

The site statistics by Alexa 2.0 include to whom the site is registered, how popular it is, how many sites link to it, and whether it is safe for e-commerce. The technology also offers a list of related sites based on other Alexa user patterns.

Netscape incorporated Alexa technology into in its upcoming Communicator 4.5 suite, as part of the "smart browsing" offerings. A "what's related" feature, developed from a partnership between Netscape and Alexa, provides a drop-down box with an automatically generated list of recommended related sites. The feature relies on servers for Netcenter (Netscape's portal site) for a database of links, which are automatically updated via software that tracks surfers' Web usage.

Alexa is archiving publicly available content on the Web so that users who get a "404 Not Found" error message can view the most recently archived version of an unavailable Web page.

"The Alexa service has been the Web's best-kept secret, reserved largely for those Web surfers who like comparison-shopping the sites they are surfing," Peter Krasilovsky, vice president of research firm Arlen Communications, said in a statement.

**SEARCH FOR MORE:**



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## Gunter's Web

By  
Steve GunterInvite who you  
want to that  
special party

Slap together a passel of pixels and viola Thomas Jefferson in the not-actual flesh appears to confer with you or to update your understanding of the Declaration of Independence.

Can't get anyone interesting to attend your party, punch in some pixels and who you want is who you get.

You say, "How, Steve, how do I make all that magic happen?"

The Japanese are out front with virtual products like the ones above. Hollywood loves the payscale for virtual actors. The business world will inevitably "hire" more virtual workers in the stores we frequent. These products are coming to the stores, the movies, and soon just like television right into our very own living rooms.

On July 2 the Christian Science Monitor published a valuable discussion of these topics in its online Ideas section. Stars could make virtual copies of themselves and thus never grow old on the silver screen. The actual actor could retired while the virtual star worked on and on and on world without end. (<http://www.csmonitor.com>)

Who would you summon to come and hang out with you when this virtual self software is available for home use? Socrates

ALEXA is the absolutely neatest thing you can add to your cybersurf experience. What is it? Imagine a YAHOO that goes right along with you as you weave your way in the Web. ALEXA silently compares the page you are on to similar quality pages that are out there on the net but whose existence you have never ever dreamed of. A simple click and ALEXA shows you "where to go next." You must download this now! [www.alexa.com](http://www.alexa.com)

...

Are you like me and question the validity of bug zappers? Do you doubt anything can stop the influx of flies into every facet of daily life? Do you hanker to know more about the Deer Tick? Have you ever contemplated the Cornworm and its relation to the meaning of life?

That's when the Iowa State Entomology Department website rushes in to save the day. Every type of entomological extracurricular event is here for your edification and even entertainment. <http://www.ent.iastate.edu>.

...

Our Cybersalute of the Week goes out in behalf of all those folks who said, "Steve, we don't understand a thing you write but we enjoy reading it". Folks it is a comment like that which sustains the enormous effort we make to bring you this high grade cybermatter each and every week.

...

I had a Chatroom I wanted to invite you to visit, but I have lost it and when we find it again we will return with a personal invite for each of our beloved readers to enter and talk with us live on Gunter's Web.

...

Ta Ta till then. Write to us [sgunter@comp.uark.edu](mailto:sgunter@comp.uark.edu) with thoughts of your day. Friends remember to ever and always Keep On Thinking Free! ([http://members.tripod.com/~su\\_rrealist/aaa.html](http://members.tripod.com/~su_rrealist/aaa.html))



Click on Alexa's "Related Links" button, for instance, and it will display sites that other visitors to the current site have liked. Click on "Site Stats" and it shows how popular the site is, to whom it's registered and how many other sites link to it.

Perhaps Alexa's most interesting feature, however, is its "Archive" button. It's happened to anyone who uses the Internet: Click on a link, and instead of going to that site, you receive a "404 Not Found" message. It means that that site is no longer on the Web. (Bonus information for geeks and linguists: 404 is simply a numerical code assigned to a particular type of file-transfer error. It is currently considered way cool to use the term 404 as a synonym for clueless, as in "My dad is totally 404 on this whole Internet thing.")

Unlike any of the other companies or sites that offer collaborative ratings of Web sites - including Pittsburgh's WiseWire, which is now part of Lycos - Alexa keeps an archive of outdated sites. The information takes up some 12 terabytes of disk space at its San Francisco headquarters. A terabyte is 1,000 gigabytes.

When Alexa users receive a "404" message, they can click on the "Archive" button and view the page. So, for example, a visit to the "Internet Archive" site, at [www.archive.org](http://www.archive.org), reveals that some of the pages on the site are no longer available. Ironic, isn't it?

Using Alexa (the company is named after the great ancient library in Alexandria, Egypt), visitors can ask the software to retrieve it from the company's archives.

The Internet Archive is also a project of Kahle's. Its aim is to document the history of the Web. "A lot of the best stuff on the Web is dead and gone," says Kahle. "The average lifespan on the 'Net is 77 days. If this is a publishing medium, there ought to be some record of it."

Still, most people use Alexa for its "Related Links" feature, Kahle says. Peter Krasilovsky, vice president of Arlen Communications in suburban Washington, calls Alexa "the Web's best-kept secret" because it allows people to engage in "comparison-shopping of the sites they are surfing." Even Chris Carson, a spokesman for Lycos in Pittsburgh, calls it "kind of neat."

The links are related, but not necessarily favorable. Related sites at Hanson's Web site, for example, include "All 4 Hanson," "World of Hanson," "The Hanson Page" and one titled "Hanson, Please Stop Singing."

There also is the question of whether Alexa can survive in a World Wide Web defined by portals. Though he dislikes their strategy, Kahle realizes that it does create an attractive environment for advertisers. Alexa's advertisers pop up only when users click on the software's buttons.

"We've got some name-brand advertisers and lots of little guys," he says. "Wherever anyone goes, we have an ad."

In that sense, at least, Kahle sounds much like his colleagues at Yahoo!, Lycos and Excite. This is the Internet, after all. So far, the only way anyone has figured out how to make money from it is by selling



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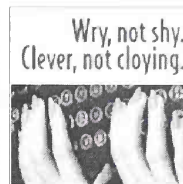
### Microsoft Dearest

July 09, 1998

By Tish Williams

Jennifer Edstrom is a character.

I didn't know what to expect of Microsoft PR chief Pam Edstrom's daughter, the co-author of *Barbarians Led by Bill Gates* (Henry Holt and Co., June 1998). From press reports I expected something between a Oaxacan zapatista rebel and the Brutus of the Microsoft republic. I figured she had to have guts of steel and an arson streak to burn all those bridges.



I had no idea.



Jennifer Edstrom cracks up UPSIDE Publisher David Bunnell.

At a dinner full of "digital bohemians," as my tablemates described it, Edstrom certainly made a splash. Daniel Ellsberg, leaker of the Pentagon Papers, was there, as were hosts John Perry Barlow, John Brockman and Brockman's son Max. Brewster Kahle, John Markoff and a host of others rounded out the tables at the Hunan restaurant near North Beach in San Francisco.

Edstrom stood there resplendent in a multitiered rhinestone choker attached to meshy long sleeves. She had one of those Pamela Anderson bodices (sans uberleavage) and a belt with rhinestone accents. Low heels. Pink lipstick.

Definitely took the hygiene and maintenance standards of the crowd up a notch.

Edstrom joined the party with co-author and Microsoft developer Marlin Eller on Brockman's invite--he published the infamous look at Microsoft's engineering culture, which touched down the week of the DoJ rulings against Microsoft. The book immediately made headlines based on the mother-daughter angle--the upstart journalist daughter locking horns with PR-master mom. Not to mention the rumored Microsoft pillowtalk.



*Marlin Eller (right) tells Jerry Michalski to have his people call Eller's people.*

### **The Book**

Was the book a hatehet job? A mother-daughter vendetta? Edstrom says no. Microsoft-bashing? Nope.

"I considered them [Microsoft executives] my extended family. But now I guess I'm the black sheep," Edstrom says. "I've been to parties and watched Gates prepare for speeches when my mom would drag me along to Comdex. I never looked at him as this great huge powerful company. But when I did the book I realized how Microsoft is absolutely feared."

Aw e'mon. Didn't she even have an inkling of Microsoft's power, and the potential backlash against the book? "I didn't. ... When I was writing the book, interviewing developers, I was completely naïve. I knew I was digging up information that was interesting, things I'd never heard--developers in the trenches actually saying we've copied the Mac and broke the Chinese wall."

Edstrom called upon Marlin Eller's developer friends, who she says were extremely willing to talk. Based on an earlier meeting with a candid Eller, she decided to work with him to provide an insider's view of Microsoft engineering, based on Eller's contacts. But then the plot thickened: "I used to think [Microsoft's] competitors were whining and jealous. But when I interviewed the development manager of Windows 95 and four other developers, I started questioning whether what Microsoft was doing was completely honest.

"They said consistently that there were never any plans to integrate the browser into Windows 95. I have one of the golden masters, and there isn't anything resembling a browser on there. My opinion changed when I heard what Gates said on the Senate floor," she says.

### **The Brouhaha**

Edstrom's been having her own public-relations problems since the book hit the shelves. "Fighting the PR is certainly a challenge. There was a critical window when the publisher was hoping for things to happen, in the first week."

But despite all the industry buzz, Edstrom that week didn't produce as many articles as she'd hoped. "I know some things were supposed to happen that didn't. That seems strange to me, especially when I gave one and a half hour interviews. I know as a journalist I wouldn't give a one and a half hour interview and waste my time."

Edstrom concludes that most reporters are probably too timid to cover the book, for fear of the wrath of the Microsoft PR machine (read: her mom). "If I'm a beat reporter covering Microsoft, the last thing I want to lose is access to Bill. My mother has done an amazing job in building relationships with the popular media. She's been doing this since the 1980s. ... She works with all the great reporters."

Which doesn't mean that the younger Edstrom isn't willing to put in her own time working a different PR angle. Talk about tenacious journalistic digging instincts--at one point during the dinner a sheepish John Markoff was milling about the room when Edstrom caught his ear. They exchanged niceties, updates on Edstrom's relationship with her mother. Then, just as everyone got comfy, Edstrom asked why the *Times* hadn't covered the book.

Markoff toed the ground. He defended the paper on the grounds that it ran a book review. Edstrom wasn't backing down and pressed Markoff as to why he didn't cover it. Once it hit the gossip columns, Markoff offered, it stayed there.

"You sound just like my mother," Edstrom smiled, as Markoff moved his weight to his other foot.

A chip off the old block? I wouldn't say that without ducking.

*Tish Williams is senior writer/editor at UPSIDE.*

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## The Net

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## Communicator 4.5 beta released

By Jim Hu  
Staff Writer, CNET NEWS.COM  
July 15, 1998, 9:00 p.m. PT

[Netscape Communications](#) has launched a public beta test of Communicator 4.5, the latest version of its Internet software suite.

As [previously reported](#) by CNET NEWS.COM,

### LIVE stock quote

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For more details, go to  
[NEWS.COM Investor](#).

the new Communicator comes with more features that integrate the browser with Netscape's newly refurbished [Netcenter](#) Internet gateway site. The new software perks include "Smart Browsing" technology, a beefed up Web email service, and more roaming capabilities, which allow telecommuters to access personalized features using different desktops.

The software suite also will include Netscape Messenger, an email client; Web-based word processor Netscape Composer; Netscape Calendar for enterprise and group scheduling; and Netscape AOL Instant Messenger, which is currently available on Netcenter.

In addition, Netscape will use software to automate the bug reporting process during the test period. The quality feedback software, produced by [Full Circle Software](#), will give users the option to send in reports to engineering and quality assessment teams when a malfunction or error arises.

A Netscape spokeswoman said that the automated process would eliminate a layer of

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people who previously had to read through newsgroups and online bug reporting systems to find feedback about software errors.

The release comes as Netscape is in the process of developing Communicator 5.0, which will be based on the Web development community's modification of the browser's source code. Netscape created [Mozilla.org](#) to guide the community effort to rally developers around the suite.

In addition, the new browser comes as Netscape increasingly focuses its efforts on beefing up Netcenter to become a major portal player on par with the [Yahoos](#) and [Excites](#) of the world.

One objective in the new software suite is to drive traffic to Netcenter by linking services from the software end to the portal.

"As Netscape aggressively builds Netcenter into a leading Internet portal site, we will continue to forge new partnerships with content and service providers and increasingly leverage our market-leading Netscape Communicator client software to greatly improve the Internet experience for consumers and business users," Mike Homer, general manager of Netcenter, said in a statement.

As reported earlier, Netscape's Smart Browsing consists of three elements that give additional short cuts to Web surfing. "Internet Keywords" allows users to type in common words or phrases that translate into URLs stored in a database. "What's Related" is a dynamic list of links to other Web sites relevant to the page viewed, and is powered by [Alexa Internet](#). And "NetWatch" uses [RSACi](#) and [SafeSurf](#) Web site ratings systems to allow users to filter out content.

"Netscape Messenger" is the new application that will become Communicator 4.5's email client. Messenger will include features such as address books, message folders, and an application that transfers files from [Eudora](#) and [Microsoft Outlook Express](#) clients.

However, in the spirit of the cutthroat browser wars, Microsoft was quick to criticize the

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"We won't make technology that will require you to have 'home.microsoft.com' as opposed to another start page," said a Microsoft spokesman.

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## Technology

NEWS FROM ZDNN

# Netscape Communicator 4.5 debuts

By Matthew Broersma, ZDNet News  
ZDNN

Netscape Communications Corp. introduced a new version of its Communicator applications suite on Thursday that blurs the old lines between software and the Internet. Many of the new features are designed to closely integrate the software with Netscape's Internet hub, Netcenter.

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A feature called "What's Related" puts a pull-down menu on the browser, listing sites similar to the one the user is currently viewing.

ANALYSTS VIEW THE integration that Netscape built into the "public beta" version of Communicator 4.5 as a crucial step in the company's drive to grab a piece of the Internet portal market. It's also a bid by Netscape to keep pace with Microsoft, which is erasing many of the traditional demarcations between a software document and the Internet.

At the very least, Netscape hopes the changes will influence the way users think about Internet software.

"America Online created a really simple user experience; it's easy to find things, to find people, to find information," said Netcenter program manager Ken Hickman. "We want to bring some of those ease-of-use facets to the Internet — to simplify the Internet."

In practice, that means that many of the buttons and menus on the new version of Navigator, Netscape's browser, contain content, often licensed from a third party.

For example, a feature called "What's Related" puts a pull-down menu on the browser, listing sites similar to the one the user is currently viewing. The feature is licensed from Alexa Internet of San Francisco.

## PORTAL PLUS BROWSER

"What's interesting is that the integration of the portal with the browser will have important implications for the industry," said analyst Chris Charron of Forrester Research. "The software and the media become more closely aligned, and that creates a whole set of issues around the selling of content and of advertising within the browser itself."

"It's less of a 'neutral' software application, and becomes the portal itself," Charron added.

In other ways Communicator ties directly into Netcenter, a strategy designed to convince more users to sign up and regularly visit the site.

## SOME EXAMPLES:

- **Smart Browsing.** This feature lets you type a common name, say, "American Airlines," into the location bar, instead of a URL. If the browser recognizes the name, it will take you straight to the correct site. If not, it will either conduct a search over Netcenter or deliver you to a subject-oriented page on Netcenter related to the query.

- **Addresses and bookmarks.** Netcenter lets you store e-mail address books and bookmarks on the site, and synchronize them with Communicator. The idea is to let users keep the information in sync across several PCs.

- **Smart Update.** Netcenter contains a library of plug-ins and software patches that can automatically install



**Netscape  
Communications  
Corporation (NSCP)**

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themselves, upgrading applications or adding functions without the user taking any extra steps.

### PORTAL PUNCH?

But many observers are dubious that even integration with Netscape's browser, which holds a little over half of the market, will make Netscape a portal on par with those of Yahoo! Inc. and Excite Inc.

Netscape, which announced the portal strategy only a matter of weeks ago, has since added content such as Web-based e-mail and news and information channels. The company has also begun an advertising campaign promoting the site in partnership with Hollywood studios. The promotional drive will include advertising outside of the Internet by this fall.

"[Netscape] should use their browser strength to buttress their portal offerings, but there are a lot of things that are needed as well," said Forrester's Charron. "They need to continue building out their consumer channels, offering tools, promoting off-line. It's all of these things that will make it work."

The Communicator 4.5 beta is available free of charge on Netscape's Web site.

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## **New Netscape suite debuts ... and blurs old lines**

*By Matthew Broersma, ZDNet*

Netscape Communications Corp. will introduce a new version of its Communicator applications suite on Thursday that blurs the old lines between software and the Internet.

Many of the new features are designed to closely integrate the software with Netscape's Internet hub, Netcenter.

Analysts view the integration that Netscape built into the "public beta" version of Communicator 4.5 as a crucial step in the company's drive to grab a piece of the Internet portal market. It's also a bid by Netscape to keep pace with Microsoft, which is erasing many of the traditional demarcations between a software document and the Internet.

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In other ways Communicator ties directly into Netcenter, a strategy designed to convince more users to sign up and regularly visit the site.

Some examples:



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The Communicator 4.5 beta is available free of charge on Netscape's Web site.

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TECHNOLOGY

**× Netscape Posts Browser Preview**Wired News Report

9:45am 16 Jul 98 PDT

It's Communicator 4.5, and it's more than a browser. It's a front end for a Web site.

Netscape (NSCP) today posted a preview version of its new browser and enterprise software. Many of the latest tweaks enhance the newest branch of Netscape's business strategy, the Netcenter Web portal (which is also where the new software can be downloaded). Prominent among the 4.5's features in the beta version is Smart Browsing, designed to make addressing and finding sites quicker and more intuitive.

Roaming Access, another feature not previously announced, lets users store their bookmarks, address books, and other preferences on Netcenter for access from any browser (though Navigator works best), on any PC.

Smart Browsing taps into a back-end, 1.5 million-keyword database at Netcenter to identify Web addresses by plain words and phrases instead of URLs. It also provides a pop-down menu of related sites -- dubbed "What's Related" -- which are culled from the 12 million sites tracked by the Alexa Internet service. If the browser can't guess which Web site is being sought, it will deliver users to the Excite-branded Netcenter search page. All this, of course, helps direct the company's 70 million-plus browser users to its new Netcenter portal.

Improved emailing is also part of the package, as is support for mobile and PalmPilot users, who can swap their email and addresses with Communicator.

---

**I t'awt I thaw a hand thignal:** If new technology from Toshiba can deliver what's been promised, PCs could one day recognize hand gestures. The company said today it's come up with a computer system that can recognize 3-D images -- even if they're moving. Software detects moving images via infrared light-emitting diodes and an image sensor. This combination, Toshiba says, could be used to build a computer-user interface that's easier to use than a keyboard, and applications that serve the disabled, the elderly, or children.

*Reuters contributed to this report.*

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JUL 19 1933

Bacon's

# Netscape Communicator update fires up Web browser war

The News Enterprise Sunday, July 19, 1598 11A



Comunicator 4.5 includes a new "What's Related" button that features a pull-down menu, listing Web sites similar to the one the

The feature is a service Netscape has licensed from Altis Internet, — a company that offers its own standalone browser "Helper" to offer links to related Web sites.

The answer offers a number of other new features, including:

- Smart Browsing: A user can type a name into the Web browser's location bar instead of a Web site address. If the browser recognizes the name, it takes you to the Web site. If not, it conducts a search via the Internet site and offers a list of suggested sites.
- E-mail address acid

The move by Netscape is intended to add value to their Web site and browser; in effect, it's a ploy to create another "Web portal," a starting point for users' Web surfing.

The C&C multimedia 4.5 beta is available free of charge to download

from NetScape's Web site at <http://www.net-scape.com>.  
**APPLE WOVES WALL STREET.** After reporting better-than-expected third-quarter company earnings this week, Apple Computer's stock soared to a 52-week high, jumping more than 10 percent.

With earnings well above those predicted by Wall Street analysts, investors took note of the company's apparent shift in momentum. With co-founder Steve Jobs as chief executive, Apple has sloughed losses, pushing its new Pentium-buster G3 Macintosh line and

**POWERBOOKS** PowerBooks notebook computers, and is set to roll out the latter line of consumer Macintoshes in less than a month.

And the company is on track for a profitable fourth quarter, analysts say, already predicting.

For information about Apple Computers, visit their Web site at [www.apple.com](http://www.apple.com).

**CASH COMMING.** The money raised by the Federal Communications Commission's long-distance phone surcharges should be crinkling to schools and

The move is an attempt to hold onto the company's dominance as the most widely used Web browser. The upcoming \$10 million campaign will distribute 125 million copies of the new Web browser. Netscape is giving consumers a 4.5-day advance to change a practice it put in place in 1995.

Continued on p. 45

Features provide closer linkage between the Web browser and the company's Netcenter Web site. Analysts say this is a move to make Netcenter more like the

**\*\* Universal Web browser as well as build business at its Netcenter**

The browser's new feature is to

# Brooks

## ■ From Page 11A

libraries this fall, according to Ira Fishman, chairman of the Schools and Libraries Corp.

The SLC was created by the FCC to handle the revenues brought in by a long-distance usage tax levied after passage of the 1996 Telecommunications Act.

The surcharge, also referred to as the e-rate tax, has created a substantial controversy, even before any of the money — destined to help wire schools and libraries to the Internet — was ever spent.

The FCC's move was taxation without representation, critics say, because Congress never approved or voted on the fee. Furthermore, they say the FCC's move to establish the tax on long-distance carriers was an overly broad interpretation of language the bill contained.

The fee won't be rescinded once schools are wired. Critics charge the requests to the SLC have included requests for new carpet and asbestos abatement.

According to the FCC, the funds can only be used to pay for portions of Internet services and internal connections within buildings — not for computers, renovations, teacher training or other items.

The SLC to date has received more than 30,000 requests from schools and libraries.

The amount of discount available for Internet services and equipment for schools is being directly linked to the percentage of children who qualify for the national school lunch program. The higher the percentage of students in the lunch program, the greater the discount available to the schools.

The FCC temporarily curtailed the e-rate program in June when long-distance carriers threatened to impose surcharges on customers to pay the tax.

The FCC recently announced that it was scaling back the amount of money by half to \$1.275 billion for 1998.

For more information, visit the SLC's Web site at [www.slcfund.org](http://www.slcfund.org) or [www.eratehotline.org](http://www.eratehotline.org).

## ■ QUESTION OF THE WEEK.

Do you support paying higher long-

distance rates to help wire our schools and libraries — even in light of statistics showing that 80 percent of schools already have Internet access? Send me your thoughts at the e-mail address below.

■ Comments and questions about this column may be sent to [jbrooks@myoldkentuckyhome.com](mailto:jbrooks@myoldkentuckyhome.com), or visit [www.myoldkentuckyhome.com](http://www.myoldkentuckyhome.com) on the World Wide Web.

## INTERACTIVE WEEK

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JULY 20, 1998

**Bacon's**3485-A  
**Impulse! Buy Network Inc.**

(www.impulsebuy.net) announced a host of new Channel Partners that will feature Impulse! Point-of-Purchase displays on their Web sites. New Channel Partners include Alexa Internet, Catalina Marketing's Supermarkets Online, Catalogsits, Coolshopping.com, Guthy-Renker Internet's Choice Mall, iVillage, Internet Broadcasting System, go2net, Metromail's DV2U, Netcentives, NetDeals.com, Planet Direct and Third Age Media. Other distribution partners include advertising network Imgis Inc. and leading e-mail service InfoBeat.

**Fragrance Counter**, an online retailer of fragrances, announced the launch of **Cosmetics Counter** (www.cosmeticscounter.com), a Web site offering brand-name color cosmetics, beauty treatments and accessories. Product offerings include such brands as Elizabeth Arden, Clinique, Estee Lauder and Lancôme. The site was developed by **Organic** in New York.

**Microsoft Corp.** (www.microsoft.com) launched its HomeAdvisor Web site (www.homeadvisor.com), offering real estate-related information to users and prospective home owners. Visitors can search for available properties and loans. **Inman News Features**, a real estate information company, is providing content for the Web site.

In other real estate news, **America Online Inc.** (www.aol.com) and **Intuit Inc.** (www.intuit.com) announced they have teamed up to launch a new mortgages area on AOL's real estate center as part







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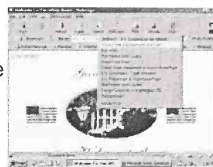
Internet

## Netscape Communicator 4.5 Preview Release 1

*Continued from previous page*

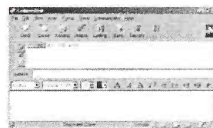
### Hey Cousin!

What's Related is a pull-down menu accessible from a toolbar button placed to the right of the address bar. When you click on the button, you see a list of sites related to the current page. From the official White House page, for example, you get a list of other government sites. What's Related now contains about 12 million URLs that are based on Alexa Internet's database and should hold about 20 million by this fall.



(Click to view screenshot.)

In addition to browsing enhancements, Netscape has also overhauled its messaging features. Netscape Messenger now supports Pinpoint Addressing--Netscape's term for auto-completes as you type--in both personal address books and corporate LDAP directories. If Messenger comes up with more than one possible match, you get a list of possible recipients from which to choose. Netscape has also restored the three-pane interface from Navigator 3.0, making it easier to manage multiple e-mail accounts and sort mail into folders. Import utilities for Qualcomm's Eudora and Microsoft's Outlook Express simplify transfers of address books, mail, and preferences to Messenger.



(Click to view screenshot.)

Corporate users will appreciate the Roaming Access feature, which allows you to store all browser and mail settings on a server where they can be accessed from any system. And devotees of the PalmPilot hand-held PC will love the e-mail and address book synchronization utilities.

**Download**  
 Communicator  
 4.5 Preview  
 Release 1 from  
 our Software  
 Library

Other new features include an optional Quality Feedback Agent, which gathers information on your system when you experience a problem with Communicator and reports back to Netscape, as well

as an enhanced version of SmartUpdate that promises to reduce download times on updates by allowing byte-level patching.

Perhaps the biggest news has less to do with Communicator itself than with its integration with NetCenter. The Smart Addressing feature, for example, will allow Messenger users to search for e-mail addresses--not only in their personal address books and corporate directories--but also from Netscape's Member Directory. (Users who register for the Member Directory can choose whether they want to toss their rotary card files into the ring.) Communicator users will also be able to store their e-mail, bookmarks, and address books on NetCenter, where they will be accessible from any system. These features are not included in Preview Release 1 but should be available within 30 days.

Together, Netscape's Smart Browsing and messaging features are part of a strategy to make finding information and people on the Internet easier--and, of course, to boost traffic on its NetCenter Portal site. On both counts, success is likely. Microsoft has released a Developer Preview version of [Internet Explorer 5.0](#), but it's still too early to tell what Redmond has in store for end users. In the meantime, Communicator 4.5's integration with NetCenter gives it an edge.

**Netscape Communicator 4.5 Preview Release 1.** *Price: Free download from [home.netscape.com](http://home.netscape.com). Netscape Communications Corp., Mountain View, CA; 650-937-2555; [home.netscape.com](http://home.netscape.com).*

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## Navigator 4.5

**Version:** 4.5

**Company:** [Netscape](#)

**Platforms:** Win 95 MacPPc

**Download Link:**

<http://home.netscape.com/download/prev.html>

**Description:** Browser with "What's Related" feature

So we scooted outta here early on Friday to get a good seat at the big [Roger Daltrey](#) show at Baltimore's Artscape Festival. We'd been big Who fans for a long way back, though, as they say, "we really like their old stuff."

Anyway, we brave the heat, the humidity, the crowds, the drunks, the cops, the panhandlers, and the bad sausage and end up getting a pretty good seat on the lawn, right in front. We're all a little excited, an excitement bolstered by several rapidly warming cans of cheap swill.

So we wait. And wait. And wait. And fight off blanket interlopers. And wait. And finally, after about 2 hours, the British Rock Symphony comes out and starts to play...

Peeeeewwwww! Stinko, dude, stinko! We've never been fans of over-orchestrated rock and this sounded like the second coming of "The Henry Mancini Orchestra Plays Your Favorite Elevator Rock Hits." All we can say is that Led Zeppelin was never meant to be experienced as sung by a quartet of music school yodelers.

Roger was OK...for an old guy...but we couldn't help but wish that someone had warned us what we were gonna be in for. Nice stuff, in its place, but a little old and stale.

So (segue alert!) that brings us to Today's release of Navigator 4.5 beta. For most of the surface appearance, things are mainly the same. Some buttons have changed a bit (there's a "My Netscape" button at the top-- all the better

for shuffling you off to their "portal" site) but nothing too jazzy. Until you look to the right of the location bar and notice a new button called "What's Related." That's when the fun really begins.

See, if you're usual Web experience is a bit like ol' Roger -- a bit tired, a bit worn around the edges, a bit too familiar-- then you'll like this new feature. If you've been feeling down on the Web because you're stuck in the same old rut of bookmarks you're gonna LOVE this new feature.

"What's Related" uses technology from [Alexa](#) to suggest new sites like the one you're currently surfing on. It works pretty well, too -- in our tests, we actually did like the sites suggested as alternatives. And we're not exactly sure how it works but we'll guarantee a new "Web Positioning" war as sites battle to make the most "What's Related" lists. Yeeehhhhaaa! Watch the dust fly!

In the meantime, if you're feelin' a bit bored, if you're feeling like you're missing stuff on the Web, or if you're just feeling like a middle-aged rock star, give Navigator 4.5 a try. They're even throwing AOL Instant Messenger and the Shockwave plugin for extra fun. Even if you don't like the "What's Related" feature, you'll be sure to dig the thrills and spills of another beta release!

[Previous Tool](#)  
[Today's Tool](#)

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■ Make Your Web Site Mean Business.

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■ Alexa's free Web navigator deftly searches for Web sites.

Alexa Internet's **Alexa** 1.4 is a freeware browser add-in that helps users sort through the excess of information generated by search engines to locate sites with quality information and...

04/27/98 InfoWorld

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■ L.A.'S TEEN STRONGHOLDS.

Brentwood and Sav-on in Santa Monica are wooing teenage cosmetic buyers with more enthusiasm than other L.A. area drugstores. Both chains devote 10 to 20 percent of total cosmetics real...

04/24/98 WWD

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■ Better surfing with Alexa

Would you like a good Web site recommendation? How about a quick reference source? Could you use an instant messaging system? If any of this sounds good, you'll be interested in **Alexa**...

04/01/98 Inside the Internet

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■ Mapping your Web site with SiteMap

Better Surfing with **Alexa**, "we mentioned that you can get a site map for the Web site you're currently visiting. **Alexa** outsources this service, and it's useful enough by itself to deserve...

04/01/98 Inside the Internet

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■ Find Information Faster

Finding Web sites on the Internet has never been a problem. Finding the right sites has been. Each search engine plays by its own rules, returning different results in a different order...

03/24/98

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■ Navigation Utilities

**Alexa** helps steer you to where you might want to go next, with a list of related links for any site you visit. **Alexa** also searches its database to give you information about a site you're...

03/24/98

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■ The Essential Toolkit

The risks of suffering a computer virus attack have multiplied with the increase in e-mail and Web usage. Whether you use your PC at home or in a corporate setting, you need a strategy...

03/24/98

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■ Several Web sites can help Windows HTML developers.

There are a number of Web sites available that help Windows developers create Web sites and obtain detailed performance information. **Alexa** is a freeware program that tracks the number...

03/02/98      InfoWorld

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■ What's in Online

Building community is key to the health of almost any Web site. Now, with the help of a new genre of customizable browser shells, Internet service providers, community sites, and online...

03/01/98      Computer Shopper

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■ Yahoo!InternetLIVE

Join host Greggson for this timely chat on what's involved in being a father in the '90s. [ichat.iconnet.net:4080/\\*index?client=plugin&start=/world/rooms/Dadsan](http://ichat.iconnet.net:4080/*index?client=plugin&start=/world/rooms/Dadsan) Animation Chat Midnight...

03/01/98      Yahoo! Internet Life

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■ The Hot Spot

Ever wondered just how big the Internet is? According to Brewster Kahle and Bruce Gilliat of **Alexa** Internet ([www.alexa.com](http://www.alexa.com)), the public Internet contains about 8 terabytes of information-all...

03/01/98      Computer Shopper

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■ Free Download Of The Month

The free Web navigation add-on provides users with a variety of cool services, such as link suggestions (for finding new sites based on your surfing preferences), quick-click access...

03/01/98      Yahoo! Internet Life

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■ Alexa provides additional ways to navigate the Web.

Web browser utility available as a free download over the Web, provides crucial Web site information that can help users gain confidence in the reliability of Web-based services. The...

02/23/98      InfoWorld

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■ Disk-drive hardships no surprise

Margaret Kane Dismal announcements from disk-drive makers Seagate Technology Inc. and Quantum Corp. Thursday came as no surprise to industry analysts, who said today the industry is...

01/16/98

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■ The Future of Search

These pages offer a good guide to searching, but it's apparent that such tools, no matter how advanced, still can't keep up with the Internet. The amount of data, the rapidity of change,...

12/02/97      PC Magazine

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■ Seeking the right search tool.

Internet search software use pattern analysis to find information, but testing showed **Alexa** to be much more useful than Concept Explorer Pro. **Alexa** analyzes the site currently being...



12/01/97

Windows Magazine

Items 1 to 25 of 40

**NEXT** 

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**Work**  
by Donna J. Abarnathy

# Sharpen Your Search Tools

According to a recent International Data Corporation ([www.idc.com](http://www.idc.com)) phone survey, 92 percent of respondents say they access the Net at work. A *Wall Street Journal* ([www.wsj.com](http://www.wsj.com)) survey reveals that 87 percent of *WSJ* subscribers surf the Net for information.

We use the Net to email each other, access listservs, share files with co-workers, and search for information. Of those activities, searching can be the most confusing and time-consuming. It has been compared to hunting for a needle in a haystack or wandering through a library of unorganized books. But the good news is that search tools are improving.

Generally, search tools are indexes or directories, though some are both. Indexes are information collectors. Web robots scour the Web to update databases, so you usually get fresher Website links using robot-type searches. On the other hand, you can get useless Website links that have an obscure

mention of your search words.

Examples of indexes are Infoseek ([www.infoseek.com](http://www.infoseek.com)) and AltaVista ([www.altavista.digital.com](http://www.altavista.digital.com)).

Directories are human-created Website catalogues. That means you're less likely to find irrelevant Websites. The downside is that they're usually not as current as indexes. Examples of directories are Yahoo! ([www.yahoo.com](http://www.yahoo.com)) and

Magellan ([www.mckinley.com](http://www.mckinley.com)).

Most tools search by keyword. You can add Boolean operators (such as AND, OR, and NOT) and include/exclude operators (+ and -) to increase your odds of receiving meaningful search results. There's no uniform search method—each tool has its own. So, when one produces lackluster results, try another. The chart below shows what some popular search tools can do.

## Power-Search Tips

You can use these search methods to boost your Web productivity. (For more guidance on using them, go to Help in your search tool's main page.)







**Boolean operators.** Use *AND*, *NOT*, *OR*, and *NEAR* to construct search strings. Example: *training AND development NOT sports* gives you true t&d Websites and eliminates most sports-related sites.

**Wildcards.** Use an asterisk to perform a pattern-matching search. Example:

*lead\** yields results with *leading*, *leader*, and *leadership*.

**Include/exclude.** Use + and - signs to define what words you want and don't want in your search results. Example: *+software +training -Macintosh* gives you software training sites that exclude the word *Macintosh*.

**Quotes.** Use quotation marks to search for a phrase. Example: "executive coaching" returns sites that contain that phrase, not just *executive* or *coaching*.

Search Tools	Search Results			Search Options			What's New?
	URL	Summary	Relevance Ranking	Boolean Operators	Wildcard* (or equivalent drop-down box)	Include/exclude +/-	
	x	x		x	x	x	<input type="checkbox"/> link to Wild, Wild Web tv show Website <input type="checkbox"/> LookSmart directory added
	x	x	x	x		x	<input type="checkbox"/> personalized homepage service with NewsTracker service <input type="checkbox"/> "Manage Your Career"
	x	x	x	x		x	<input type="checkbox"/> LookSmart directory added <input type="checkbox"/> HotBot Shopping Directory
	x	x	x	x		x	<input type="checkbox"/> "Best Bot" topic lists <input type="checkbox"/> free Webpages
	x	x	x	x		x	<input type="checkbox"/> revamped personalized service <input type="checkbox"/> ZDNet software downloads
		x	x	x	x	x	<input type="checkbox"/> free email with personalized pages <input type="checkbox"/> new Spanish version.







## Sizzlin' Sites for Presenters

Bookmark these Websites for business presenters:

□ **Alynn & Bacon Public Speaking Website**, [www.abacon.com/pubspeak](http://www.abacon.com/pubspeak)

Here's a Website that's loaded with useful information and links. Learn to assess your speechmaking situation, analyze an audience, research a topic, organize and write a speech, and deliver a presentation. There are also notes from the instructor and interactive exercises to guide you.

□ **Bartlett's Familiar Quotations**, <http://www.columbia.edu/scis/bartlett/bartlett>

Looking for a memorable quote for your next presentation or speech? You can search for it by keyword or by author (from Chaucer to Shakespeare to Rutherford B. Hayes) in this 1901 classic.

□ **Virtual Presentation Assistant**, [www.ukans.edu/cwis/units/coms2/vpa/vpa.htm](http://www.ukans.edu/cwis/units/coms2/vpa/vpa.htm)

This helpful site is maintained by the communication studies department at the University of Kansas. You'll find research resources, delivery tips, visual aids help, and links to public speaking sites here.

## Web trek: the next generation

A promising and relative newcomer to online data navigation is Alexa ([www.alexa.com](http://www.alexa.com)). This service crawls all publicly available Websites continually to create a snapshot of the Net over time. The Alexa service acts as a browser companion that

□ creates information and statistics about Websites, such as how other people rate the sites

□ displays archived Webpages no longer available (eliminating many dead links)

□ provides instant access to the *Encyclopedia Britannica*, *Britannica Internet Guide*, and *Merriam-Webster Dictionary and Thesaurus*

□ clusters similar sites and pages.

Alexa works with Navigator 3.0 or later versions and Internet Explorer 3.0 or later versions on Windows 95 and NT. Best of all: It's free to download at its Website.

If you spend much time digging for information online, it's important to learn how to search smart. It's easy to get off track when you can't find what you're looking for, so you should equip yourself with some sharp tools. Find a couple that perform well and deliver the extras you need. Then, learn to work them. After all, life's too short to be in perpetual search mode.

## Virus FAQs

Q: What is a computer virus?

A: A virus is a computer program designed to alter your computer system without your knowledge.

Q: Can you contract a virus by reading an email message?

A: No. The potential danger is not in the email text, but in attached files. You can get a virus via email only by executing a virus program found in an infected file attachment.

Q: Are all email warnings about viruses legitimate?

A: Those that insist that you can get a virus simply by reading an email message are hoaxes. To check recent hoax lists, go to [www.symantec.com/avcenter/hoax.html](http://www.symantec.com/avcenter/hoax.html). You can read about virus myths and realities at [kumite.com/myths](http://kumite.com/myths).

Q: What's the best protection against viruses?

A: Use such virus protection software as Norton AntiVirus or McAfee VirusScan. Also, don't use email attachments from unknown sources.

(Source: Rob Kaighn, ASTD Information Systems)

## URL Express

Hate typing Web URLs? If it consists of [www.\[name\].com](http://www.[name].com), simply enter the [name] part. Try it—type IBM in the URL block. Netscape and Internet Explorer fill in the rest for you and deliver the Webpage!

## Savvy Travel

Continental Airlines has a new reward program for small businesses. RewardOne. Organizations can use it to earn bonuses based on employees' accumulated points. Bonuses include upgrades, Bronze OnePass Elite Status, Presidents Club memberships, and free tickets. For information, go to [www.flycontinental.com/products/rewardone](http://www.flycontinental.com/products/rewardone).

©Work covers Internet technology trends, news, and tips. Send comments, questions, and items of interest to [awork@astd.org](mailto:awork@astd.org)

## Free and Easy

Can't get enough of that freebie stuff? Check out these online finds.

### Employee manual guidelines.

This guide offers a basic outline of an employee or policy handbook. It provides sample sections and offers a "Ten Key Points List" to important areas that a manual should include. Go to LRR.net at [www.lrr.net/employ1.htm](http://www.lrr.net/employ1.htm).

### Mail call

Here's no-frills email you can use without an Internet account. No cost. No hassle. No file attachments. Fill out a demographics survey and download at [www.juno.com](http://www.juno.com).

### Show me the Monet.

The WebMuseum offers hundreds of downloadable fine art files that can be used for Websites and presentations. Think of the possibilities. Go to



## LOST AND FOUND IN CYBERSPACE: THE ALEXA NAVIGATION TOOLBAR

The Web has gotten very big, very fast. When you go to your favorite sites, you know what to expect, but when you're surfing, it would be nice to get a little context — to know who owns the site, how popular it is, and how other people feel about it. The Alexa Toolbar gives you this information and more. It shows you how the site is rated for privacy, authentication and content, and where other people go from this site.

### Site Information Kiosk

Alexa is a new navigation service, one that becomes, becoming a part of the browser infrastructure and gives you useful information automatically as you surf the web. The Alexa Toolbar, a floating window (Figure 1) tied to your browser, shows you the metadata about the site itself: who owns it, how popular it is (in terms of Alexa user visits and links). A pop-up window (Figure 2) shows you full domain owner information, number of total visits, Alexa visits and votes, as well as additional site statistics extracted from the Internet Archive, such as the number of links into the site, the number of pages on the site, the server response speed, and how "fresh" (recently updated) the site is.



Figure 1. Alexa's toolbar at the Dilbert site

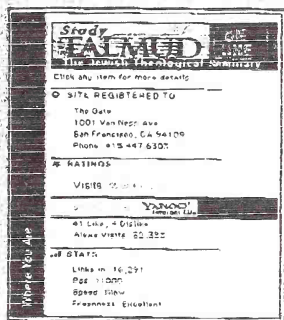


Figure 2. Alexa's pop-up window for SFGate site.

Alliances with other services provide additional information, including:

- Yahoo! Internet Life (general usefulness ratings).
- TrustE (privacy practices certification).
- VeriSign (authenticity verification, for Web Commerce).
- RSACI (Recreational Software Advisory Council on the Internet, providing content ratings, including pornography warnings).

All this information gives you guidelines to understand what kind of site you're visiting, which is useful at the best of times and vital for business relationships.

### Automated Pathways

Alexa is also creating information itself. It tracks the usage paths of its users, not individually, but as a flow. It watches Alexa users to learn what sites are commonly visited in the same part of a web browsing session. It also learns from Alexa users, who "vote" on whether or not they like a site (Figure 3). These paths and votes are stored on Alexa's servers and used to provide additional relational metadata (individual users are not tracked). Other similarity information includes links from one site to another, and content equivalence analysis. So even sites without many Alexa visitors will include links to related sites.

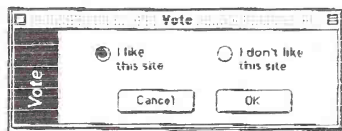


Figure 3. Voting with Alexa.

The Related Sites pop-up (Figure 4) allows other Alexa users to avoid useless sites and concentrate on the good ones, as determined by the paths and votes of users going to sites similar to the ones you visit.

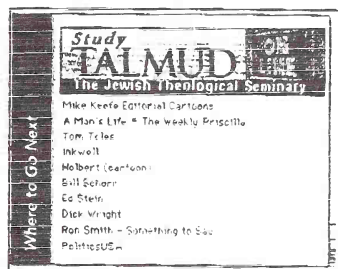


Figure 4. Alexa's Related Sites pop-up window

### Finding Lost Pages

In addition to site data, Alexa is connected to the Internet Archive <<http://www.internetarchive.org/>>. This is a project which crawls the Known Web every couple of months, follows all the links it can find, and stores copies of all the new and changed pages in huge databases. This spring, they're up to 10 terabytes (thousands of gigabytes), which is as much as one half of all the information stored in the Library of Congress (if that were digital). It's growing by a terabyte a



# WORKERS OF THE WEB, UNITE!

# SiteWarrior!

[www.sitewarrior.com](http://www.sitewarrior.com)

month, as the Web grows. The Internet Archive, which stores much more pages than any search engine, provides snapshots of the Web over time, and will prove extremely fertile ground for researchers of the future. But it can also help us in coping with the Web as it is today.

Alexa will automatically check the Internet Archive database whenever you ask for a page that isn't there. There's not much it can do for typos in URLs, but if the page just got lost or deleted by accident, Alexa's button will activate, and you'll be able to bring up that old page from the Archive.

#### And That's Not All

The Alexa Toolbar also links to the Encyclopedia Britannica, Merriam-Webster Dictionary and Thesaurus and other useful reference guides.

Alexa Internet also offers a "backlink" service, allowing web site developers to install a button that displays a list of all the sites linking to their site or page. And you can contract for usage path information to target your most important colleagues and competitors.

How do they pay for all this? The Alexa Toolbar is free, supported by discreet advertising square, much smaller than a button (though unfortunately often animated). Advertising is targeted, so you won't get ads for shoes when you're looking for Web servers.

The Mac Alexa software runs on 68040-based and Power Macs, under System 7.5 and up, running Netscape or Microsoft Internet Explorer 3.0 or higher; it occupies about 500-1000K of RAM.

#### Innovation in Navigation

Alexa does what good software should do: helps you concentrate on the work you're doing, whether it's a question you're pursuing or just browsing the Web. It performs the repetitive, boring tasks such as checking on site registration and ratings, so you don't have to. I think of the Alexa Toolbar as part of my browser, and don't want to work without it.

See <<http://www.alexa.com>> for more information.





But while they offer improvements over current search engines, these are all useless. For example, when it comes to sharply focused queries, such as searching for an unusual phrase and the complete lyrics to a song, which would accept questions in plain English now that really would be a great leap forward.



Return-Path: <quimby@antennapr.com>  
Date: Thu, 13 Aug 1998 12:00:54 -0700 (PDT)  
Subject: Interesting Article from Inquisit  
From: Quimby Mills <quimby@antennapr.com>

Here is the article again - don't know why it didn't come the first time.  
Enjoy!

Cheers,

Quimby

\*\*\*\*\*  
Inquisit watches hundreds of wire services, newspapers,  
and magazines for articles about the customers, competitors,  
products, and people that impact your business. Get your free  
trial subscription at <http://www.inquisit.com>  
\*\*\*\*\*

CONNECTED: Still looking for the holy grail Internet technology Finding  
information on the Web should be easier with three new search technologies but,  
says Tom Standage, they still leave a lot of room for improvement  
(Daily Telegraph London; 08/13/98)

Quality or quantity? That's the choice you have when you start looking for  
something on the Internet. Rely on a directory service like Yahoo, which  
employs a team of human editors to select a small number of "quality" Web pages  
on a particular subject, and there might not be a link to the page you need.  
But if you turn to a more comprehensive full-text search engine like AltaVista,  
which indiscriminately indexes every page it can find, you'll most likely be  
deluged with an overwhelming quantity of matches to your query.

Clearly, what is needed is a middle way: a means of ranking large numbers of  
pages automatically. Three new search technologies attempt to do just that, by  
deducing which Web pages are most relevant with the help of clues left behind  
by other Internet users.

The first, called WiseWire, takes the direct approach of asking you to give  
each site you visit a rating from 0 to 100, by clicking on a score bar  
displayed in a frame alongside. Your ratings are sent back to a central  
database, and are used to rank sites for subsequent users, who also provide  
their own ratings, and so on. But while WiseWire is simple, effective and  
democratic, it relies on active co-operation from its users. What happens when  
people get bored of clicking?

Alexa, another new search and navigation system, gets round this problem by  
recording users' paths across the Internet automatically. Described by its  
makers as a "surf engine", it's a piece of software that runs alongside your  
browser, providing extra information about each site you visit and suggesting  
related links. These related links are generated by analysing the behaviour of  
previous visitors to the same site: which other sites did they visit, how long  
did they spend looking at each one? (The prospect of software watching your  
every move sounds scary, but Alexa's makers insist all tracking is done  
anonymously, so users' privacy is protected.)

But what if you'd rather not follow in the footsteps of other Web users?  
Hyperlink-Induced Topic Search (HITS), an experimental search engine developed  
by Dr Jon Kleinberg of Cornell University in conjunction with IBM, takes yet  
another approach. Rather than asking the readers of Internet pages which sites  
are worth visiting for information on a particular subject, HITS cunningly asks  
the pages' authors, by seeing which pages they thought were worth linking to.  
The logic works like this: the more Web pages that link to a particular page,

the more valuable the information on that page is likely to be.

HITS analyses the relationships within clusters of linked pages (since pages on a particular topic tend to link to each other) and gives each page a score depending on how many pages link to it, and how valuable those pages in turn are deemed to be. As an added bonus, this approach neatly distinguishes between different meanings of the same word - such as Apollo (the Greek god) and Apollo (the space programme) - as pages related to a particular meaning naturally group themselves into separate clusters.

All three methods are coming soon to a browser near you: Lycos bought out WiseWire in April, and was granted a patent on its algorithm last week; Alexa's technology is being used to provide the "Related Sites" feature in Netscape Communicator; and researchers are working to retro-fit HITS-like clustering and rating into AltaVista and Inktomi, the engine that powers HotBot.

But while they offer improvements over current search methods, none is perfect. They are all useless, for example, when it comes to sharply focused queries, such as searching for an unusual phrase to find the complete lyrics to a song.

Ultimately, while they improve the quality of results returned, these new techniques are a long way from doing away with the need to learn complicated search syntax rules. It's the complexity of search syntax that is the real culprit behind the vast number of matches returned in most searches, because most users can't be bothered to learn it.

Co-operative searching looks like being the next big thing in search engines over the next year or so, but it's still a long way from the holy grail of Internet searching - a so-called natural language interface, which would accept questions in plain English. Now that really would be a great leap forward.

Try out WiseWire's rating system at: [www.wisewire.com](http://www.wisewire.com)

Alexa (PC/Mac) can be downloaded from: [www.alexa.com](http://www.alexa.com)

More information about the HITS algorithm: [decweb.ethz.ch/WWW7/1898/com1898.htm](http://decweb.ethz.ch/WWW7/1898/com1898.htm)

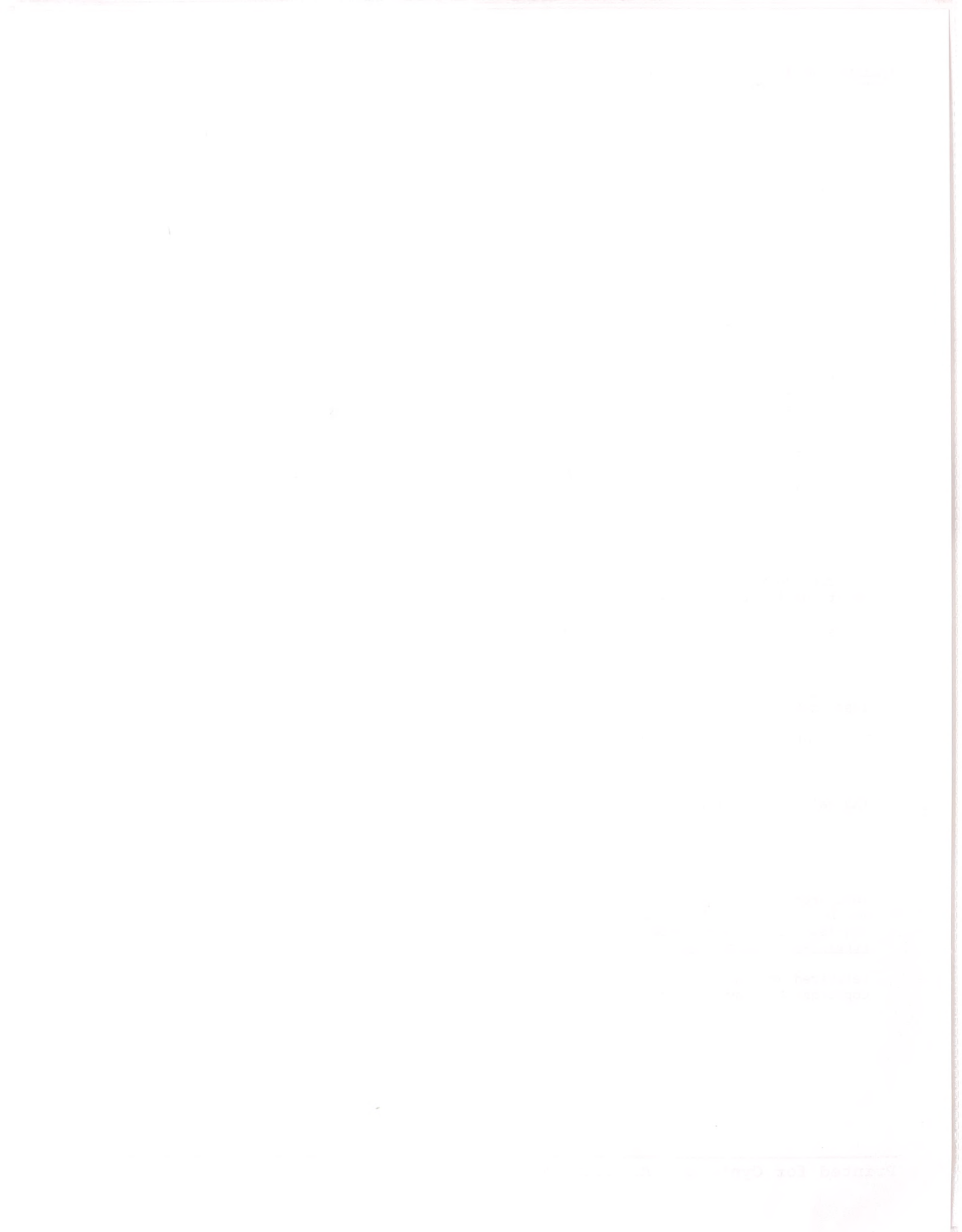
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AUGUST 13, 1998

**Bacon's**

3965-A

## Where Sites Go to Die

**Q.** What happens to abandoned Web sites?  
Do they stay on the Web?

**A.** Orphaned sites are a sad thing, indeed. Ignored by its creator for whatever reason, a stranded page will just sit there until someone (or some program) deletes it from the host Web server.

In some cases, the company that is the host of a particular site will pull the plug if the site's creator neglects to pay the bills or to update the site over a certain period of time. A once-popular page might be voluntarily shut down as its creator moves on to other things, leaving a dead end from another page that links to it.

The Internet Archive is an organization that is trying to find, record and store a copy of every public document on the Web, dead or alive ([www.archive.org](http://www.archive.org)). The group's own site offers a link to a free program called Alexa, which runs with your browser. If a dead page is in the archive, Alexa can show you what it looked like.

For a humorous look at pages that once burned brightly and then flickered out, visit Ghost Sites ([www.disobey.com/ghostsites](http://www.disobey.com/ghostsites)), an active page that chronicles inactive ones and is updated monthly.

J. D. BIERSDORFER

Circuits invites questions about computer-based technology, by postal mail to Questions, Circuits, The New York Times, 229 West 43d Street, New York, N.Y. 10036-3959 or by E-mail to [QandA@nytimes.com](mailto:QandA@nytimes.com). This column will answer questions of general interest, but letters cannot be answered individually.



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## INSIDER NEWS

### HEAD COUNT: ADOBE, WEBLOGIC, VITRIA, NETSCAPE

By [Owen Thomas](#)  
Red Herring Online  
August 14, 1998

#### Adobe's CEO stuck in the mud

What words does a chief financial officer never want to hear? "These expected results are unacceptable." That was the message Adobe CEO **John Warnock** sent out as he announced layoffs of 10 percent of the company's staff and canned CFO **P. Jackson Bell**. **Robert Roblin**, executive vice president of marketing, and **Ross Bott**, an executive vice president who headed up Adobe's products divisions, also felt the axe. Adobe told Wall Street it expected to post a loss after one-time charges, instead of earning half a buck per share, as analysts expected. The company blamed Asia for its financial woes, but Mr. Warnock's booting of the three executives and formation of a new executive management team to report directly to him makes it pretty clear where he's pointing the finger.

*Adobe's only bright spot as of late has been its [venture strategy](#).*

#### Top VC to join WebLogic's board

**Frank Caufield** -- you know, of Kleiner Perkins *Caufield* & Byers fame -- has joined the board of WebLogic, a San Francisco-based Java startup. The high-flying venture capitalist, who's served on the boards of companies from America Online to VeriFone, invested in the company privately some years ago, but is stepping up his participation. For the company, Mr. Caufield adds another independent board member since **Ali Kutay** became CEO in June.

*Here's the story on [WebLogic's new CEO](#).*

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value-add](#)



### Vitria's CFO a smooth operator

Usually, a tech company adds a CFO when it's eyeing the public markets. Vitria Technology's new hire looks to be more than a green-eyeshades man, however. **Paul Auvil** left a post at VLSI Technology, where he was vice president and general manager of the chipmaker's Internet Products division, to take care of Vitria's financial, legal, HR, and IT worries. Sounds like a load off CEO **JoMei Chang**'s shoulders -- but why not give him the title of chief operating officer? That's closer to his job description, but perhaps it sounds a bit too lordly for the 80-person Java startup.

*JoMei Chang started out as a researcher at heart.*

### Netscape hires away Oracle exec

**Barry Ariko**, an Oracle executive vice president and member of the executive management team, was recruited away by Netscape CEO **Jim Barksdale** to be his No. 2 man. That's surely a blow to **Mike Homer**, who was bucking for the COO spot himself, and instead got stuck with running the Netcenter Web site. (Remember, Mr. Homer noisily cancelled all of Netscape's content initiatives a few years ago -- just as he's now noisily promoting the browser maker's content initiatives.) Mr. Ariko will have the more grown-up job of growing Netscape's enterprise software business.

### Talent pool

PointCast CEO **David Dorman** brought on Pacific Bell buddy **Robert Sofman** as senior vice president of business development and international operations -- can you say "buyout scout?" ... Yoyodyne named **Barbara Johnson** its new COO ... Playboy Online tapped **David Lalich** as its senior vice president of marketing; he was formerly at Classified Warehouse ... **Graham Smith** is the new CFO at Nuance Communications ... Alexa Internet hired **Doug Hansen** to be its director of sales ... **Lyn Chitow-Oakes**, formerly at Electric Communities, has joined Flycast as its VP of marketing ... Influence Software, a knowledge automation startup, has hired **Steve De Marco** as VP of sales and marketing and **Jose Morales-Correa** as professional services VP ... **Debra Chrapaty**, ETrade's chief information officer, has been named president and COO of the online brokerage's ETrade Technologies unit ... **Rod Canion**, Compaq's cofounder and former CEO, sent the stock of GK Intelligent Systems into a freefall

Quando looks like an Infoseek bargain

In brief: Adobe bleeds bad news

GeoCities IPO strong, but hamstringing by market

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when he left the board in a huff -- he also took several former Compaq employees with him.

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#### INSIDE SOURCES

Important information for industry insiders that you won't want to miss is available in [The Information Market](#). This month, we're featuring [The 1997 IPO Report](#) from VentureOne along with other valuable newsletters.

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8/14/98

Bacon's

3955-A

# The Internet Never Forgets

Post In Haste, Repent At Leisure

By J.D. Lasica

**G**igabytes have been written about the digital revolution, but little attention has been paid to one of its most potentially profound social changes: The Internet doesn't forget.

Memories fade, but electronic archives are turning fleeting snapshots of our past lives into permanent records that may follow us forever.

And that has enormous consequences for us as communicators, journalists, and citizens.

The common perception is that the Web is a fragile creature filled with dead links, "404 Not Found" error messages, hasty emails, and other transient digital debris. Indeed, leading figures on the Net have bemoaned the wholesale loss of the Web's early years, such as many of the political sites devoted to the '96 election.

But efforts are under way to change all that. Brewster Kahle of San Francisco, inventor of several Internet search engines, is trying to collect, store, and catalog the entire World Wide Web and all 33,000 usenet newsgroups.

Kahle's nonprofit Internet Archive and more recent Alexa project are out to become the modern equivalent of the Library of Alexandria: the repository of all the world's public digital information. To date he's copied and stored some 8 trillion bytes of words, images, and sounds (compared to 20 trillion in the Library of Congress).

"If we don't organize the Internet, people will tune out all the noise. They'll settle for calling up 10 channels, and we'll just have television on the Net," he says.

Kahle—who has cooperated with publishers to iron out copyright issues—and others seeking to organize and preserve the Internet deserve high praise for making its riches more accessible. But we all need to raise our awareness of how such efforts are also shrinking the sphere of personal privacy.

## Cautionary Scenarios

Consider three areas:

• **Job Hiring:** Applying for a new job? There's a

fair chance your prospective employer will use a search engine to scout out your online writings, from prosaic travel pieces to hot-tempered postings to a political newsgroup. In a recent discussion on the online-news listserve, a mailing list of more than 1,000 news professionals, several employers—including an editor at the *San Francisco Examiner*—said they routinely scour the Net to gauge the habits and personalities of job candidates. That drew an impassioned rebuke from Marie Cowly, a freelance writer in Woburn, Massachusetts, who was unaware that her postings to the group had been catalogued for all the world to see. "When I typed my name into a search engine and found everything I've ever written online, it was a little like coming home and finding someone had gone through my personal belongings," she says. "I felt violated and helpless."

Like it or not, such online sleuthing is here to stay. Used judiciously, the Net's search capabilities offer a valuable tool for cutting through the spin of a resume and selective clips, ultimately providing a fuller picture of a job candidate's qualifications. But employers tread into unethical waters if they begin probing someone's political or religious beliefs, sexual orientation, attitudes toward unions, or quirky personal hobbies. My fear is that even the most fair-minded managers will have their judgment colored.

• **Background Checks:** Until now, journalists have generally respected the private lives of ordinary citizens. Will the new culture of information saturation—where personal lives become public fodder—reshape our journalistic values? When we write about an interview subject, how deeply should we probe the foibles, mistakes, musings, and indiscretions of a prominent attorney, pastor, civil servant or teacher? Do we redefine what is newsworthy because scraps of a person's past have become immortalized in a cold, unfeeling, easy-to-link-to digital archive?

And what of politicians—do we hold candidates for public office up to a more exacting stan-

**Alexa's Brewster Kahle:**  
*"If we don't organize the Internet, people will tune out all the noise. They'll settle for calling up 10 channels, and we'll just have television on the Net."*

dard? Kahle muses, "It's likely that the president we elect thirty years from now already has a Web page up, posted from his college dorm, and future journalists and pundits will have a field day poring over his college-age musings." Will we be able to resist?

• **Digital Footprints:** Anyone who communicates on the Net, including journalists, should be aware that they may be leaving permanent digital footprints, available not only to potential employers but to neighbors, strangers, landlords, rivals, enemies, future lovers, descendants not yet born. This can be both blessing and curse.

For many of us, it would be marvelous for our grandchildren to rummage up our very first home page. For others, whose online forays may not be the stuff of posterity, a gentle forgetfulness would be far kinder. But that may no longer be possible. The digital attic has begun collecting and storing bits and scraps of our lives. There will be no yard sales, no chance to tune out the useless clutter. The Net has forgotten how to forget. ♦

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This column first appeared in the June 1998 issue of *The American Journalism Review*.



opinion

Web Builder  
Palo Alto, CA  
8/15/98

# Making a Killing

by Michael Swaine

**A**fter the "killer apps" of the '80s—those category-creating, industry-changing applications like the electronic spreadsheet and the desktop publishing program—it made sense to look for the killer sites of the '90s. After all, the Web was the successor to the desktop, thus "killer sites."

Trouble was, there weren't any—except maybe for something called "portals." Which turned out, on close examination, to be merely the latest wrinkle in those all-too-familiar List of Links to Other, More Interesting Sites.

I'm beginning to think that the next killer thing won't be a thing. The Net isn't a thing place; it's about connections if it's about anything at all. It's connections that make the Net, the Net. And it's connections, of one kind or another, that will bring us the bright ideas of the next decade.

I suggest we start watching for killer synergies.

For example, suppose you deconstruct the functionality of a Web browser and incorporate it into your operating system. After all, browsers were never application software anyway. Word processors, spreadsheets, database managers, and DTP programs all have specific functions: they read, print, display, and allow the editing of data in specified formats. Browsers can't edit and have notoriously bad printing support. A browser is a bundle of technology, not an application.

So why not unbundle the browser's technology and inject it into the DNA of the operating system? All your application programs suddenly acquire browser capabilities. In the next release, anyway. Brilliant idea. Great synergy.

And if it happens to get you sued by the Justice Department, that doesn't make it bad technology.

Another example: Netscape took way too long to recognize that its browser wasn't a viable long-term revenue source, and they've suffered sorely for their tardiness. But Netscape did see early on the synergy between its browser and its Web site, and exploited it. A huge amount of traffic flows through Netcenter (<http://home.netscape.com/netcenter/>), much of it because that's Netscape Navigator's default start page. That flow translates into megabucks in ad revenues.

OK, I'm talking about portals again, but this time I'm suggesting that we see the genius of the browser-portal chemistry rather than the dullness of a corporate strategy based on users being too lazy to change their default start pages.

The synergy rather than the lethargy.

Netscape has now launched a new version of Netcenter, with even more browser synergy. So far, the government hasn't noticed. Maybe killer synergies aren't what put you in the Justice Department's sights.

A final example: One of the technologies showcased on Netscape's renovated site has its own synergy. "What's Related" button provides a list of sites that are conceptually related to a given site. There are a lot of variations on the search engine theme, but it would be a mistake to think that this is just another one.

Netscape developed this feature with Alexa Internet, the company that has been constructing a mind-bogglingly large archive of the Web for some time now. Brewster Kahle is the brain behind the archive, a unique and expensive body of content which he has combined with clever technology for exploiting it to create Alexa (<http://www.alexa.com>). The genius of this synergy is that no one, without intimate access to the same content, can do anything quite like Kahle has with Alexa.

My guess is that the killer ideas of the near future will also be clever synergies of rich databases with custom software for exploiting the data. And they won't all belong to Microsoft or Netscape.

Deliver something that nobody else can. Now there's a business plan. ◀

I'm beginning  
to think that  
the next killer  
thing won't  
be a thing.

Michael Swaine writes about computers, the computer industry, high-tech business, the Internet, Web development, and such other computer-related topics. He can be reached at [m.swaine@swaine.com](mailto:m.swaine@swaine.com).



Canadian Musician

Welcome to Music Online, a regular department of CM featuring news and highlights of music online including the Internet, the major online services and music related PBSS.

If you have questions, comments, news or suggestions, please e-mail them to [norris@nor.com](mailto:norris@nor.com), FAX (905) 641-1648 or mail them to our St. Catharines office.

This department and back issues appear at the Canadian Musician website at [www.canadianmusician.com](http://www.canadianmusician.com)



## the ultimate travel planner

**O**n the road again? It seems we're always travelling somewhere – on tour, signing record deals, publicity junkets, trade shows, holidays (yah right). Needless to say, the most successful trips are preceded by some careful planning. So fire up your browser and let's begin.

All airlines have web sites and to find the one of your choice, look in Yahoo ([yahoo.com](http://yahoo.com)). They will list schedules and fares and in many cases you can book flights online at their site. Many airports also have sites and will help you with facilities, ground transportation and connecting flights.

Most of the major car and truck rental companies can be found on Yahoo and rates and booking information is available.

All major hotel chains have web sites and you can find their locations, hotel facilities and make reservations online. Smaller hotels, inns and bed and breakfasts can be found by looking up the specific cities and searching for accommodations. For worldwide listings, check out The Hotel Guide at [www.tiledudes.com/index.html](http://www.tiledudes.com/index.html).

To check the Canadian dollar against foreign currencies, use the Currency Converter at [www.canda.com/cgi-bin/icc](http://www.canda.com/cgi-bin/icc).

To decide what to pack, visit The Weather Channel at [www.weather.com](http://www.weather.com). Check current conditions and the five-day forecast for cities around the world.

If you look up particular cities in Yahoo, you can get information on accommodations, restaurants, entertainment, transportation and local serv-

ices. City and regional maps can be found at Yahoo Maps ([maps.yahoo.com/yahoo/](http://maps.yahoo.com/yahoo/)) or at Pathfinder ([www.pathfinder.com/travel/maps/](http://www.pathfinder.com/travel/maps/)).

If you are having trouble getting along in foreign languages, try the online translator at [dictionaries.traveling.com/](http://dictionaries.traveling.com/).

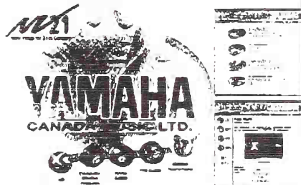
You can also find local music stores, rental companies and sound and lighting companies by searching by city and under the relevant headings in Yahoo.

For more travel resources, visit The Music & Audio Connection ([musicandaudio.com](http://musicandaudio.com)) and look under Resources-Travel.

Travelling will never be completely stress-free but a little Web browsing can take away some of those nasty surprises.

## Resources

Yamaha Canada has premiered their website at [yamaha.ca](http://yamaha.ca). Here you will find company background, product information, education programs and links to Yamaha worldwide.



If you are looking for a Canadian 800 number, don't call the operator anymore. Visit Canada Tollfree at [canadatollfree.sympatico.ca/CanadaTollFree/](http://canadatollfree.sympatico.ca/CanadaTollFree/) and search for listings by business name or keyword. Find U.S. 800 numbers at AT&T's directory at [www.tollfree.att.net/dir800/](http://www.tollfree.att.net/dir800/).

To locate shareware and freeware visit File Dudes at [www.tiledudes.com/index.html](http://www.tiledudes.com/index.html). Search their site by operating system or by program name or description.

To put more direction in your web travels, try Ateka, free for download at [www.ateka.com](http://www.ateka.com). This desktop utility sits at the bottom of your web browser and gives you extensive information on the site you are visiting and recommendations on sites with related content. You can search through their archives to find pages that no longer exist and locate websites by subject on the Encyclopedia Britannica site.

If you are attending the AES Conference in San Francisco, visit the Audio Engineering Site at [www.aes.org](http://www.aes.org). You will find exhibitor information, location, events schedule, hotel information and registration details.

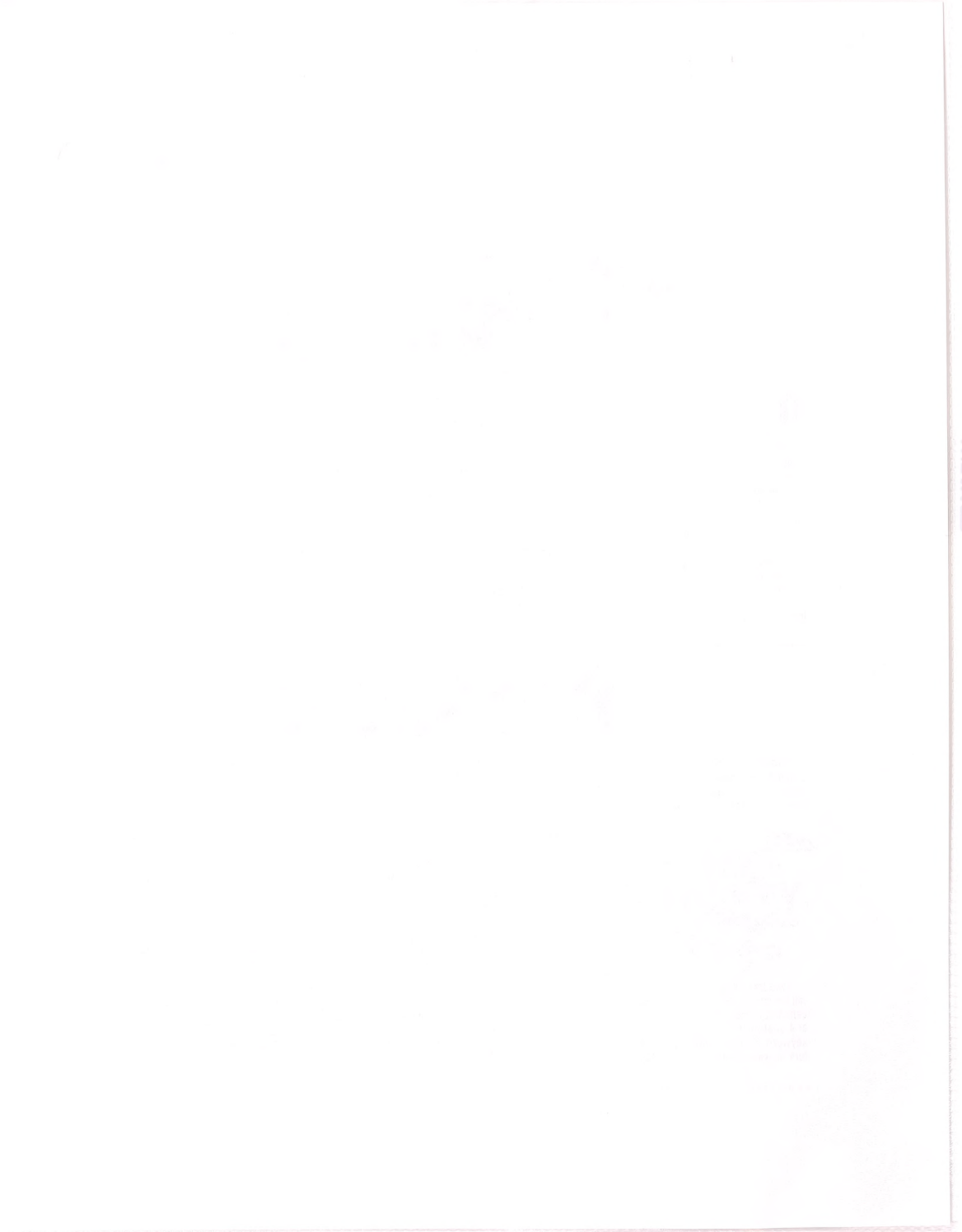
The Connection Software Center was established by Norris-Whitney Communications in conjunction with e-Warehouse. The Center features over 30,000 software titles on business, fi-

nance, entertainment, graphics and design, Internet and utilities. The site offers fast and secure online processing and real-time inventory status and features boxed and downloadable software. Visit at [maac.com/software](http://maac.com/software).

Fender, one of the best M.I. sites around, has recently revamped their website. Featured are products, company info, artists, The Fender Club and Fender apparel. Drop in for a visit at [www.fender.com](http://www.fender.com).

Norris-Whitney Communications operates The Music & Audio Connection, the international online resource for music enthusiasts, musicians, music and audio professionals. Included are classified ads, products for sale, company showcases, discussion forums, associations, music education, music & audio resources, career information and file libraries. Updates to the site are available by e-mail or on The Postcast Network, visit at [musicandaudio.com](http://musicandaudio.com). For more information, e-mail to [info@nor.com](mailto:info@nor.com), FAX (905) 641-1648 or call (905) 641-3471.

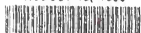




ALLEYCAT NEWS  
New York, NY

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AUGUST 15, 1998



**Bacon's**

## Month in Review

### miscellany

#### V-Cast Wins Patent

V-Cast Inc. ([www.vcast.com](http://www.vcast.com)), makers of the file delivery service GigEx, has received a patent for its client-server file delivery technology for delivery of online information and data. The patent covers fundamental areas of Internet file delivery, including "push," recoverable download, background delivery, scheduling and confirmation. The U.S. Patent and Trademark Office issued V-Cast patent number 5,768,524. In addition, the patent relates to a graphical channel selector interface which includes multiple channels and a resizable

scrolling ticker. V-Cast's clients include Alexa Internet, CMP Media Inc., JFAX Communications, The New York Times, Pinpoint Games, Time Warner and Release Software.

#### Morrison & Foerster Expands Venture Capital Practice

In an effort to increase its capacity to represent early stage and technology companies, the law firm of Morrison & Foerster LLP has taken on seven attorneys from the recently disbanded corporate finance firm Ziment, Hatties, Friedman & Kaplan. Charles

Friedman, who specializes in mergers and acquisitions and venture capital financing, joins Morrison & Foerster as a partner. Former Ziment partners Isabel Wacker, Marjorie Elkin and Ross Hyatt have signed on as Of Counsel. Lisa Jill Brovender, John Cleary and David Henkoff have taken positions as associates. Morrison & Foerster's New York practice, which hosts a new media luncheon series, has been an aggressive presence in the Alley Over the last two years; the firm has added 34 lawyers to its corporate finance practice.

### people, places, & happenings

In its continuing efforts to assert itself as a player, **Wit Capital** ([www.witcapital.com](http://www.witcapital.com)) is beefing up its

management team. **Bob Jessin** (former Solomon Smith Barney vice chairman), who joined Wit last month as chairman,

is also assuming the role of CEO. Similarly, **Ronald Reulmond**, former vice chairman of Charles Schwab & Co. and previously a director of Wit Capital, will now assume the role of Wit's president and chief operating officer. He will also have the title of vice chairman. Wit has also hired **William Tkacz**, who founded the private transaction group for Cowen & Co., serving as head of private equity. **Matthew Carbone** is joining the firm as a senior investment banker and brings with him a team of professionals from his previous position as senior vice president at Solomon Smith Barney. **Larry Forrest** assumes the position of executive vice president. He is also a director of the company and president of its broker-dealer subsidiary. He was previously the chief operating officer at Brown & Co. and before that an executive with Bankers Trust, Paine Webber and Dean Witter.

Also moving over to Wit is **Beth Polish**, formerly a member of the very active KMPG team working in the Alley, who will serve as Wit's senior vice president and head of corporate development. The move is not Polish's first foray into a start-up. She was formerly the chief financial officer for iVillage, where she was responsible for raising the community company's first major round of financing.

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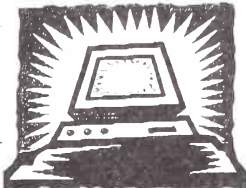
Bacon's

3985-A

## Audio Online

by Jan Norris

Welcome to Audio Online, a regular department of PS featuring news and highlights of audio online including the Internet, the many online services and music related URLs. If you have questions, comments, news, or suggestions, please e-mail them to [jnorrisc@net.com](mailto:jnorrisc@net.com), FAX (905) 641-1648 or mail them to our St. Catharines office.



# America Online Update

Every few weeks, I get a disk from America Online and they usually get missed. I have been a member of Compuserve and AOL off and on since 1982 but I generally do not recommend any of the Online services for Internet access because of the cost. The offer said 100 free hours so I thought, what the heck. The installation was a snap. It came on one diskette and after entering personal information, including a credit card, it dials an 800 number and prompts you to choose a local access number. It then re-connects and you are online. Any additional components or updates that you need, including their web browser, are downloaded automatically as required. Navigation once online is very friendly and you have the choice of several subject-specific channels or search capabilities.

There are two main reasons to have an America Online account, possibly in addition to your regular account with a local provider.

(1) The quality and organization of the content is superior to most websites out there since it is a paid service.

There are extensive areas on business, travel, computers and software including The Mac Software Center which is a treasure for Mac users.

There are also areas focused on music and more. For example, Digipulse has its own area with a message board, software and information on all different products. The K Music and Sound Forum includes extensive MIDI resources, downloads and information on MIDI products.

(2) If you travel a lot with your notebook, you can use AOL for your local access. They provide local access in 1500 cities in over 100 countries. Your local provider can't do that. You can at least receive and send mail but might and day surfing will cost you big bucks.

So next time you get an AOL disk at the mail, give it a try for the trial period or download the software at <http://www.aol.com>. You might find it a great online resource. There must be a reason why millions of users have made it the largest single group on the Internet.

## Resources

Fender, one of the best M I and pro audio sites around, has recently revamped their website. Featured are products, company info, artists, The FenderClub and Fender Apparel. Drop in for a visit at [www.fender.com](http://www.fender.com).

If you are attending the AES Conference in San Francisco, visit the Audio Engineering Site at [www.aes.org](http://www.aes.org). You will find exhibitor information, events schedule, hotel information and registration details.

To put more direction in your web travels, try Alexa, free for download at [www.alexa.com](http://www.alexa.com). This desktop utility sits at the bottom of your web browser and gives you extensive information on the site you are visiting and recommendations on sites with related content. You can search through their archives to find pages that no longer exist and locate websites by subject on the Encyclopaedia Britannica site.

Steinberg Norrils America has moved their website to [www.steinberg.net](http://www.steinberg.net). Featured are sections on their whole range of products as well as a complete dealer list.

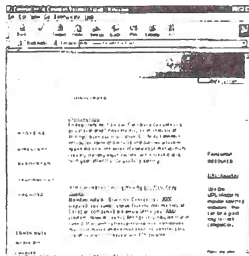
If you are attending LDI in Phoenix this year, visit

their website at [www.cenex.net/ldihome.htm](http://www.cenex.net/ldihome.htm). You will find information on exhibitors, workshops and special events and you can register online.

If you have access to a browser, but not to e-mail, one answer is Hotmail at [www.hotmail.com](http://www.hotmail.com). For instance, I am writing this column at Kink's in Nashville and their machines do not have Internet e-mail capabilities and I need to get the file to my office. Enter Hotmail. For free, you can set up an e-mail account where you can send and retrieve mail from your browser and keep a personal address book. You can even set up a POP mail account so that you can read your e-mail at home or the office. It receives your POP mail instantly and in a format that is superior to most e-mail programs. Try it out.

Canada One is an extensive business resource site aimed at Canadian business. Aside from the wealth of information on business management and promotion, you can also list your own website. Visit at [www.canadaone.com](http://www.canadaone.com).

Norris Whitney Communications operates The Music & Audio Connections, the international on-line resource for music enthusiasts.



musicians, music and audio professionals. Included are classified ads, products for sale, company showcases, discussion forums, associations, music education, music & audio resources, career information and file libraries. Updates to the site are available by e-mail or on The Pomcast Network Visit at [musiccanadaone.com](http://musiccanadaone.com). For more information, e-mail to [info@net.com](mailto:info@net.com), FAX (905) 641-1648 or call (905) 641-1671.



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AUGUST 16, 1998

**Bacon's**

## Where do Web sites go to die?

New York Times News Service

**Q.** What happens to abandoned Web sites? Do they stay on the Web?

**A.** Orphaned sites are a sad thing. Indeed, ignored by its creator for whatever reason, a stranded page will just sit there until someone (or some program) deletes it from the host Web server.

In some cases, the company that is the host of a particular site will pull the plug if the site's creator neglects to pay the bills or to update the site over a certain period of time. A once popular page might be voluntarily shut down as its creator moves on to other things, leaving a dead end from another page that links to it.

The Internet Archive (<http://www.archive.org>) is an organization that is trying to find, record and store a copy of every public document on the Web, dead or alive. The group's own site offers a link to a free program called Alexa, which runs with your browser. If a dead page is in the archive, Alexa can show you what it looked like.

For a humorous look at pages that once burned brightly and then flickered out, visit Ghost Sites

(<http://www.disney.com/ghostsites/>). An active page that chronicles inactive ones and is updated monthly.





## POWER USER

John McCormick

## Serious about surfing? Try out these browser alternatives, plug-ins



Faster Internet connections do make a difference for serious Web searches, but software helpers can be even better. Software is easier to acquire and install than, say, buying and setting up an Internet-

ed Services Digital Network link.

If you have to wait for what seems like forever to get to hot links, try a browser accelerator. These handy utilities store locally the pages you most recently visited. A browser accelerator's best feature is its ability to preload pages.

Browser accelerators copy to your PC's hard drive or memory the pages for links on a Web page as you're browsing. How much of a boost you get depends on how fast you read, how many links the page has and whether the software downloads the link you want before or after you click on it.

Most accelerators operate as proxy servers, inserting themselves between your Microsoft Windows browser and the Internet. You might shudder at the thought of adding yet another software layer—and with good reason. Proxy servers introduce new bugs, require configuration and support, and might make your system crash more often.

### Pedal to the metal

Even so, I like using Go Ahead Got It from Go Ahead Software Inc. of Redmond, Wash., a non-proxy-server accelerator with lots of performance-enhancing features. Read about it at <http://www.goahead.com>.

Go Ahead Got It preloads pages you visit frequently along with pages you specify. More importantly, it lets you know when a page has changed; most other accelerators just speed up your views of old data.

My favorite search engine is Yahoo, but others have different strengths. AltaVista, Lycos, WebCrawler, Excite and Infoseek are all general search engines, and there are country- and topic-specific search sites, too.

For serious research, try <http://www.isleuth.com/>. The Internet Sleuth site lets you search all the general search sites simultaneously or choose among 3,000 others.

This single site has thousands of categories, each of which can connect to multiple databases. For example, the arts and humanities category covers architecture, art, genealogy, history, humanities, literature and performing arts, plus subcategories.

Under government, there are far too many agencies and categories to list, each



# Give your browsers a new interface and save time in training

POWER USER from Page 55

Letting you search multiple databases simultaneously

Perhaps you're a beginner and can't decide where to enter or how to get around once on the Web. There are easier alternatives to the ubiquitous Microsoft Internet

Explorer and Netscape Navigator browsers. Keep in mind that you will need to use one of the two at least once to download an alternative browser, unless you can talk someone else into doing it for you.

Check out <http://www.neoplanet.com> for NeoPlanet, a full-blown alternative perfect

for novice or occasional users. NeoPlanet, created by Bigfoot, L.P. of New York, isn't a true browser. It simply puts a new interface on Internet Explorer to hide the most frustrating aspects.

Agency administrators who load NeoPlanet on their new users' computers will

## spend a lot less time in support and training

Another alternative Web navigator suitable for intermediate or advanced users is Alexa

Internet, at <http://www.alexa.com>. Instead of replacing the Explorer interface, the San

Francisco company's information tool bar gives more detailed information about sites

It has an online encyclopedia, dictionary, thesaurus and a tool to help users reach "404

Not Found" sites they can't reach in the normal way.

### For sore eyes

The last feature relies on Alexa's archive of more than 500,000 Web sites. It isn't

infallible, but often a desired page is only temporarily unavailable because a server

went down or the periodic site-locator upload file left it out.

Sometimes a site no longer exists, of course, but all the user wants is to read some

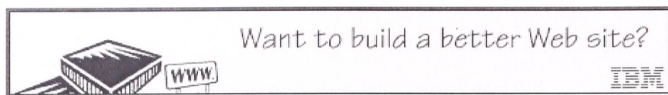
information from the first screen. In both cases, the Alexa Archive can be a lifesaver.

The tool bar takes up screen room, but you can collapse it or close it selectively.

Even if you must download the 1.6M ALEXASETUP4N.EXE file over a slow dial-up

connection, the 10-minute installation is worth it for serious surfing.

John McCormick, a freelance writer and computer consultant, has been working with computers since the early 1980s. E-mail him at [poweruser@pcnn.com](mailto:poweruser@pcnn.com).



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AUGUST 17, 1998



Bacon's

3985-A

# A computer screen in your glasses?

BY FRANK P. O'NEILL

Some of technology's most creative thinkers gathered in California's Silicon Valley recently to describe and show off their latest ideas, which ranged from a talking couch that tells you when your nap is over to a pair of eyeglasses that double as a computer screen.

Companies that usually see themselves as competitors — including Microsoft, Xerox, Hewlett-Packard, Apple and IBM — sent researchers to the New Paradigms in Computing annual conference at IBM's Almaden Research Center in San Jose.

Some researchers showed off their latest gizmos, while others just talked about them.

✓ Gordon Bell, who helped invent Digital Equipment Corp.'s successful VAX minicomputer,

described a "guardian angel" that you'd wear on your wrist that would have sensors to keep track of blood pressure, heart rate, insulin levels and would alert you when something goes awry.

Bell, now working at Microsoft's research lab, is working on a "cyber admin" that would catalog everything you read and could call up anything from fragments of memory.

✓ Brewster Kahle, inventor of the landmark WAIS program for finding documents on the Internet, described the newest invention of his company, Alexa: an intelligent Internet navigator intended to learn from users

who organized the event, talked about a world where tiny computers are everywhere, all responding to humans' needs or wants — keeping clothing comfortable and

doing blood tests without finger pricks.

His contributions included the talking couch and a "digital coach," exercise machine that prodded a user on with a drum beat and the voice of an Arnold Schwarzenegger-style trainer.

✓ Barbara Hayes-Roth, known for her work in artificial intelligence, demonstrated software agents being developed by her company, Extendo. A dog named Max and a wizard named Merlin were among the characters Extendo designed to make working with a computer more like working with a person.

✓ Thad Starnier, a researcher at the Massachusetts Institute of Technology media lab, showed off the funny, thick eyeglasses that also work as a computer screen.

"They're actually fashionable frames from France," said Starnier, who has been wearing the computer glasses for the past two months.

The glasses are connected by a cord to a hand-held keyboard called the "widdler," which is the size and shape of a hot dog bun. Starnier carried the keyboard in one hand and carried a credit-card-size computer with a Pentium processor in the other.

Using the computer and looking into a tiny screen embedded in the glasses, Starnier can take notes, read and answer e-mail, search the Internet — essentially do most anything you can normally do with a computer.

"There's no reason you have to have a desktop machine," said Starnier. "The desktop and laptop will go away because this is much better for your eyes and hands."



## ON THE MOVE

## ► COLORADO

Customer Communications Group promoted **Sandra Gudat** to president and chief operating officer. Gudat was previously a senior vice president. The Denver-based relationship marketing company also hired **Jody Wagner** as director of publications sales.

## ► NORTHERN CALIFORNIA

**Brian Gale** was named vice president and general manager of Schulze Media Works in San Francisco.

Citigate, San Francisco, hired senior art director **Frank Doyle**, managing supervisor **Monica Bahner** and copywriter **Ellen Scheetz**.

The 3DO Co., a video game company in Redwood City, hired **Lauren Ward Larsen** as vice president of marketing. Most recently, Larsen served as vice president of marketing for Wadsworth Publishing.

**Douglas Hansen** joined San Francisco-based Alexa Internet, a free Web navigation service, as director of advertising sales.

The Herlhy Marketing Group in Oakland promoted **Jeffery Tarran** from vice president to president.

Hayes Marketing Communications in San Jose hired **Dawn Sansone** as an account coordinator and **Ryan Mahar** as a graphic designer.

**Leslie C. Wilson**, most recently of Leagas Delaney in San Francisco, joined DanaForan Marketing Communications in Sacramento as an account management executive.

Shugart Matson Young in San Ramon appointed **Steven J. Davison** vice president, media director.

Splash Technology in Sunnyvale appointed **Michael Orr** vice president, sales and marketing.

**Mitch Zak** joined Stoorza, Ziegauz, Metzger & Hunt's Sacramento office as a campaign manager.

**Eric Benjamia**, national sales director of the Advocate/Weekly Newspapers, has been appointed president of the board of directors of the Alternative Weekly Network in Sacramento.

Curious Pictures, a bioacastal, live-action graphics, special effects and animation studio, named director/designer/animators **Denis Morella** creative director of its San Francisco office and promoted **Holly Edwards** to senior producer.

**Steven Thompson** was named associate publisher of Ziff-Davis' *Internet Business*, at the magazine's San Francisco office.



JODY WAGNER  
Colorado



BRIAN GALE  
Northern California



JEFFERY TARRAN  
Northern California



HELEN CONNOR  
Oregon



KEITH DANZIGER  
Oregon



VIVIAN EGASHIRA  
Washington

live and **William Brown** to account coordinator. The shop also hired **Kimberly Craig Smith** as senior copywriter on its Toyota Dealers Association account.

Survivor, a Santa Ana-based manufacturer of industrial respiratory protection equipment, named **Kirk Thompson** sales manager for its Southwestern territory and **Lucl Rasmussen** advertising and promotions manager.

Matthews/Mark, San Diego, hired three new employees: **Eleanor Novak**, media supervisor; **Sara McCandless**, assistant account executive; and **Todd Smith**, account coordinator.

The Townsend Agency in San Diego added four members to its public relations team: **Sarah Thailing**, account executive; **Bridget Stachowski** and **Justin Silbaugh**, assistant account executives; and **Patti Zamora**, public relations coordinator.

**Doug Yates** was named vice president, marketing, at Fox Kids Network in Los Angeles.

**Fox Family Worldwide**, Los Angeles, recently established a consumer products division, headed by executive vice president **Ellie Dekel**.

JSM+ Communications in Santa Monica promoted **Jeff Corryell** from associate media director to group media director.

Ad-Star Services, a provider of remote ad sales solutions in Los Angeles, hired **Adam Leff** as chief operating officer and vice president.

Producer **Scott Gardenhour** was named president and chief executive officer of The Farm Studios. The West Hollywood-based production company also signed directors **Jeff Gorman**, **Gary Johns** and **Ramona Mosley**.

**Big Bang Media** in Los Angeles hired **Jay Cole** as executive vice president of marketing.

**Paulette Wihelmy** joined direct marketing agency **Walter Latham** in Newport Beach as executive vice president, managing director.

**Lorenz Advertising** in San Diego hired **Martin Roosch** as a project designer.

**Morgan Marketing & Public Relations** in Irvine hired **Mike Buonauro** as an account coordinator.

## ► WASHINGTON

**Vivian Egashira** was promoted to vice president/general manager at Hinton and Steel Advertising in Seattle.

—compiled by Gregory Turner

## ► OREGON

McClenahan Bruer Communications, a Beaverton-based advertising and public relations agency specializing in high-tech accounts, hired **Helen Connor** and **Keith Danziger** as senior counsels.

## ► SOUTHERN CALIFORNIA

VirtualMagic Animation in North Hollywood hired **Jan Nagel** as director of business development and marketing.

Saatchi & Saatchi in Los Angeles promoted **Kathy Evers** to account execu-







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# Net Surfer



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First Published August 18, 1998 Bay Area Edition

## Netcenter: A Portal to The(ir) Web

Like other portals, Netscape's is woven of partnerships



by Elizabeth Crowe

Just when you thought it was safe to surf the Web, portals came along. A portal is a glorified list-o-links page, where Web sites are gathered under categories or channels so surfers can quickly find information on, say, dog breeds or Beanie Babies. Excite, Yahoo!, Infoseek, and Lycos were once competing search engines. Now they have evolved into competing portals, adding services such as e-mail, chat, forums, and news and partnering with other companies to provide some of the content.

It's not a bad concept. Just remember that the objective is to provide enough information, services, and goodies to keep you there--or at least keep you coming back--so the portal provider can sell advertising based on the traffic it generates. If your portal lets you develop a personalized page, the portal companies can even target ads to your apparent interests. (For the consumerist perspective on portals, see this issue's [User Outlook](#) column.)

The latest entry into the portal arena comes from Internet ur-business Netscape. Its Netcenter is the revamped, revised, and reprogrammed site that appears as your default Web page when you launch a Netscape browser, click the Netscape logo in the upper right-hand corner of your Navigator browser, or type [www.home.netscape.com](http://www.home.netscape.com) or [www.netcenter.com](http://www.netcenter.com). Like other portals, Netcenter features a membership directory and edited categories of links, e-mail, forums, search engines, and goodies that work with the newly released beta of Netscape Communicator 4.5. Also, like any portal, Netscape hopes to convince you that the Internet and Netcenter are the same thing.

The July debut of Netcenter 2.0 (and the companion upgrade of Communicator 4.5) generated a lot of heat and a bit of light. It's either the best thing since sliced bread for new Internet users or the most nefarious commercial exploitation since long-distance service slamming, depending on whom you believe. At least investors seemed to like it: Netscape Communications Corporation stock price vaulted 53 percent the day after Marc Andreessen told CNN that the company was talking to media companies about publishing content on Netcenter to give its portal more appeal. Personally, I feel that Microsoft Internet Explorer's bid to make the whole desktop a portal isn't any

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Microsoft Internet Explorer's bid to make the whole desktop a portal isn't any different from Netscape's attempt to direct you to an online portal with NetCenter. Take a close look at Netcenter and you'll see the shape of portals to come.

**Getting Around Netcenter**

Navigating the site is fairly easy. Netcenter provides links back to the main areas (WebMail, Member Center, etc.) along the top of each page, a list of the channels at the bottom of each page, and links to a site map and general information.

The opening page of Netcenter has a search engine box where you can choose the engine you want and type your key words. It also has a listing of the 17 channels Netcenter currently provides, news headlines from ABCNews.com and Netscape corporate headquarters, links to weather and horoscopes, and other doodads. In the future, Netscape will let you choose the channels and headlines you want to see when you launch your browser, as Excite and Yahoo! do already.

My one peeve with Netcenter's home page is apparently unavoidable. Periodically when I surf to the home page, a separate browser window will open and show an advertisement. It's annoying to have to close this window before I can use the portal page.

**The Privileges of Membership**

Most portals ask you to fill out a preferences form. Then they can create a cookie that will personalize the opening page for you. Netcenter wants a little more commitment out of you. It offers access to certain services—such as Professional Connections, the Netcenter Member Directory, and Netscape WebMail—only if you sign up as a member. The required personal information is relatively innocuous: your name, e-mail and snail-mail addresses, and country of residence. Of course, once you become a member, you become easier to target. As Netcenter's own Member FAQ says, "Registration ... enables Netcenter services to be personalized to your liking."

When I first tried the Netcenter site in its beta stage, I had to jump through a lot of hoops to register, including taking out a Verisign digital certificate. Netscape apparently relaxed that rule later. A friend who recently signed on didn't have to get a certificate. However, you still have to remember your ID name and password to use the members-only areas of Netcenter.

Netscape claims that registering will not result in unsolicited commercial e-mail. The Netcenter Privacy Policy states, "We will not provide such information to companies you have not interacted with, and we prohibit the companies that get such information from selling or redistributing it without your prior notice."

Click the Members icon at the top of the opening page to enter the Member Center. Here, Netcenter lets you look up other Netcenterians and read their

may not know how to change this default, but all it takes is a couple of clicks to reassign the start page. (Choose Edit\*Preferences\*Navigator and change the entry in the Location box.) You can always get back to Netcenter by clicking the Netscape logo in the upper right-hand corner.

On the other hand, if the browser's default page has good links and information and can be customized to your interests, you may not want to change it. Netscape's betting on that.

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*Contributing editor Elizabeth Crowe specializes in online services, online research, and information brokering. She's the author of The Electronic Traveler, Information for Sale (with John Everett), and Genealogy Online, Web Edition. You can reach her via [libbi\\_powell\\_crowe@bigfoot.com](mailto:libbi_powell_crowe@bigfoot.com) or care of Computer Currents.*

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personal profiles. These profiles are an optional feature, where you provide demographic and personal-interest data above and beyond the basic information required to become a member. For instance, you can choose a name for Netcenter's chat service (called Instant Messenger), list your personal Web page's URL and your snail-mail address, and even file a 50-word (or less) public statement. You can also indicate how much of this information can be viewed by other Netcenter members.

The Professional Connections area is my favorite member area. You can get there by clicking Professional Connections from the home page or typing [form.netscape.com/directory/community/html/pc\\_main.html](http://form.netscape.com/directory/community/html/pc_main.html). The topics cover four main themes: Tech News Today, Tools of the Trade, Small Business Source, and Work the Web. Each of these areas has a handful of forums where you can participate. I found an excellent discussion on Web portals that covered the ins and outs for users and publishers alike. The Rumor Mill, where members can gossip unashamedly, was also good reading. However, like the Web Mail feature, there's no way to read these forums off-line.

### **Free E-mail-With the Usual Catch**

Netscape's WebMail is free with membership, but it comes with the same big catch of any free Internet e-mail service: You have to fill out some demographic information to use it, which helps advertisers target you. You can get away with the bare minimum-age, profession and industry-or, if you're a glutton for punishment, indicate your income, personal interests, and other juicy advertising fodder.

WebMail's features include an e-mail reader with address book and a 5MB limit on stored mail. The free features include the ability to collect mail from other POP3 accounts (up to five for free), a vacation option that lets you send an "I'm gone" message to anyone sending you an e-mail while you're away, an autoresponder that kicks on for certain subject lines or senders, junk-mail blocking, and a history of e-mail traffic. You can set up automatic signatures, define and arrange folders, and even spell-check your messages. All of this takes some time, of course, but you probably only have to do it once. Unfortunately, as with other Web-based e-mail services, you can't read your messages off-line.

Netcenter's WebMail also plans to offer Premium Services, including faxing, virus scanning, translation services, pager notification, and extra storage. However, the actual services and any extra costs involved weren't available at press time.

### **Smart Browsing Eases Searching**

The Net Search section of Netcenter is much the same as it's been for the last year, except for the improvements in Netscape Navigator itself. When you input a key word into the Netsite box (what used to be called the URL box), the Smart Browsing feature finds corresponding listings from the Netcenter's database. Say you want to find out about backgammon. Just type backgammon in the URL box. Netscape Navigator will search Netcenter's catalogs (not the

entire Web) for you.

Another feature, What's Related, offers Web pages related to your Netsite query. What's Related uses the Alexa Web navigation service, which archives and datamines Web sites to determine relationships and offer Web sites that are relevant to your search. What's Related came up with some bad links when I tested it. You can turn it off by unchecking the box under Edit\*Preferences\*Navigator\*Smart Browsing.

### Netcenter Channels

Netcenter's channels are not like the push channels we've come to know. They're just the categories of links available from its home page. The channels were created in partnership with Excite. The 17 channels that were available at press time offer plenty to explore, but here are the business areas I found most useful.

- **Career Center:** Click Careers under the Business channel to launch Netcenter's Career Center. Whether you're looking to boost your career or find a new job, you'll find many good resources here, including book listings (provided through a partnership with Amazon.com) and job-hunting resources provided by The Monster Board and the Online Career Center.

One of the most impressive features of Career Center is the Personal Search Agent, which searches Web-based job postings for jobs that match the criteria you set. You have to enter your Netcenter name and password to get access, and then create a profile. Then you select locations, categories, and key words for your search, put in your e-mail address for notification, and submit your data. The Personal Search Agent tells you immediately whether any currently listed jobs match and e-mails you when new matching jobs appear. You can also search for job postings by location and key word, post your résumé, look for employers or employees, and ask experts for career advice.

- **Business Journal by NewsEdge:** I found this area of the Business channel after I saw a flashing ad for it on the Career Center page. (OK, OK, advertising can be useful.) Here you can set up My News to receive customized business news, company information, stock quotes, and the like whenever you go to this page. I set up My News to provide information on the stock market, interest rates, and other economic indicators. The service is convenient, and the sources are sound. They include major news and business wire services and major newspapers and publications (some of which charge a fee for their articles).

### Thumbs Up

Netcenter has enough useful features for me to say it's worth a visit. But you don't have to live there if you don't want to. If you install Netscape Communicator fresh, the Netcenter page is your default home page, just as Microsoft Internet Explorer takes you to Microsoft's Start page. Average users



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## PEOPLE ON THE MOVE

keting and publications. Most recently, she was the marketing programs manager at 3Com Corp.

Reed Holderman has been named western regional director of the Trust for Public Land. Most recently, Holderman was with the California State Coastal Conservancy as manager of their natural resources and nonprofit programs.



Reed Holderman

Bay Area Community Services in Oakland has announced Daniel Bloom and Michael Foster to its governing board. Bloom has 20 years experience as a computer system consultant who served as chief financial officer for a number of Bay Area biotechnology companies. Foster is a cost accounting manager for Levi Strauss & Co.



John Carlstrom

Sausalito-based Yosemite National Institute, a provider of environmental education programs, has named John Carlstrom as director of education and outreach.

## REAL ESTATE

Coldwell Banker's San Francisco office has announced the following new sales associates: Nayer Style, Kuria Spanning, Steve Pulaski, Byron Yoder, Henry Louis, Sally Ann McInerney and Dolores Sandvick.

Caputar Realty Inc. of San Francisco has hired four new agents: Scott Taylor, Lori Ritter, Donna Faulkner and Margaret Napier.

Norman Avis has joined the San Rafael office of H&L Commercial Real Estate. Avis previously owned AVIS Realty.



Douglas Kivviston

The Hayward office of Pacific Gulf Properties Inc. has announced Douglas Kivviston as director of real estate for the company's Northern California portfolio of industrial properties. He was most recently vice president of commercial property management.

development for 3Com Corp. Also, the company's president, David Gaw, has been elected to the LanMark Interoperability Association's board of directors.

Nick Caffarra has been appointed vice president of worldwide services of Menlo Park's Syntex Technologies. Prior to that, Caffarra was vice president of world wide consulting at Prism Solutions.



Nick Caffarra

Burlingame-based Cross-Worlds Software Inc. has announced Robert Hagib as senior vice president of finance and chief financial officer. Prior to that, he served as executive vice president of finance and administrative/chief financial officer for Electronic Funds Services.



Robert Hagib



Paul Gifford

Paul Gifford has joined Andromeda Inc. as vice president of marketing. The San Francisco company supplies high-end web site activity analysis software. Most recently, Gifford served as vice president of product development at Auspex Systems.

San Francisco-based Alex Internet has named Douglas Hansen as director of advertising sales.



Douglas Hansen

Pleasanton-based Semiconductor Equipment Technology has appointed Peter Sweetnam as director of product management. Sweetnam was most recently president of Component Sales Corp.

Robert Nobis has been promoted from regional vice president of North America West sales to director of product marketing at Fremont-based SSE Telecom Inc. Lewis Cunningham has been hired as regional vice president of Latin American sales. Cunningham was formerly with ComStream.



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# Web domains continue increasing rapidly

## There are now 2.29 million 'top-level' Internet sites

Remember the hypothesis that an infinite number of monkeys, if set to typing, would eventually produce the works of Shakespeare just by banging away at their keyboards? With a key that passes it becomes increasingly likely that a single monkey typing into a Web browser would type a real URL on the first try.

In the last month the folks over at work Solutions threw out some numbers that illustrate the point. Thus far, the company that, for now, still has no monopoly on the registration of Internet sites called "top-level" Internet domains — the ones ending in ".net," ".org" and ".edu."

As of June 30, the number of these domains had grown 120 percent from an earlier 1.2 million to 2.29 million. That's a lot of dots, and, in fact, a lot of names. The company that, for now, still has no monopoly on the registration of Internet sites called "top-level" Internet domains — the ones ending in ".net," ".org" and ".edu."

As of June 30, the number of these domains had grown 120 percent from an earlier 1.2 million to 2.29 million. That's a lot of dots, and, in fact, a lot of names. The company that, for now, still has no monopoly on the registration of Internet sites called "top-level" Internet domains — the ones ending in ".net," ".org" and ".edu."

BUSINESS & EMPLOYMENT

## BINARY BEAT

where millions of just surfers can go to create or find directories of content, directories of services, directories of pages. If a portal can build a brand name among Internet users, it can generate significant piles of revenue in a couple of ways: selling advertising to companies that want to reach lots of Web users, or selling real estate on the portal site itself. Web companies that can't match the portals' overall reach

Portals have an important function today, as every business, Web-happy individual, movie, breakfast cereal and lampshade registers and begins using its own vanity domain. For your own infinite-monkeys experiment, go to Network Solutions' Web site at internet.net and type a random word into the search form. You might have to wait a while, but as Dr. Seuss might have said, oh, the places you'll go

and, oh how few are worth going to. But if portals are just gateways to something else, is there really value at the portal itself? Even the portal folks ask themselves this question, which is why they start building or aggregating content and services that will keep users on their sites. Content that does this successfully is "sticky."

Sticky content is one thing that newspapers believe they have more of than most other Web publishers. The Tribune's Internet and America Online editions are intended to be very sticky, with stories, interactive features and classified advertising that keep users within their space for long periods of time. That makes them more like "hubs," to try out another buzzword, with long spokes of content radiating out from them. Hubs also aspire to build community among users.

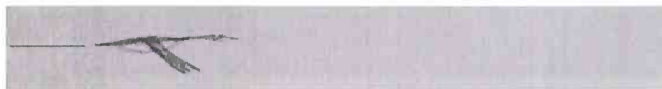
One of the most interesting variations on the portal theme comes from a company called Alexa (alexa.com).

which offers a tool that Forrester Research calls a "traveling portal." The idea is that, instead of your going to a portal site every time you need newer or more refined information on a given topic, the information is brought to you by the Alexa tool, a version of which is called "Smart Browsing" also is included in Netscape Navigator 4.5. If you have installed the tool, every time you visit a Web site, Alexa queries its own servers, then provides both information about the site and suggestions about related sites through a small window or your screen.

Needless to say, what Netscape now offers, Microsoft and others will soon match. But Forrester folks say this sort of integration will result in "a new model for Web navigation — a hybrid of portal and push." Buzzword convergence — now there's something anyone can support, especially when their report also says it could result in "a new sickness."

Jim Conies usually writes the *Binary Beat* column. He is covering from Seattle, and *On the Edge* in Vancouver. The Tribune's drive to an interactive media is filling the



**NEWSBYTES® Top Story****Study Estimates Web Grows By 1.5m Pages Daily**

(08/31/98); 1:06 AM CST

By Martyn Williams, Newsbytes  
SAN FRANCISCO, CALIFORNIA, U.S.A.,

Martyn Williams, Newsbytes. Just how fast is the Internet growing? Alexa Internet, which maintains a Web cache and database, says a survey of its database indicates an average days sees 1.5 million pages added to the World Wide Web.

The same survey also estimates the current Web is around 3 terabytes and doubling in size every eight months.

Alexa maintains a database of Web pages as part of the service it offers to users of its free Alexa service. Delivered through a small application, the service offers Web users additional information on each site delivered, such as site owner, popularity, server speed and site size.

In addition, it offers a solution to those annoying "404 - Not Found" messages by allowing users the ability to call up the most recent copy of a page from its database. It is this database that the service examined to come up with the figures outlined in its new report.

Other factoids found by the survey include the information that 90 percent of traffic is concentrated on 100,000 different host computers, while just 900 Web sites account for 50 percent of all Web traffic. It also estimated there are 20 million content areas, defined as top-level pages of sites, individual home pages, and significant subsections of corporate Web sites.

More information on Alexa and its browsing companion software can be found on the World Wide Web at <http://www.newsbytes.com>.

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**SAFE****internet advertising report****1.5 Million Web Pages Born Daily,  
According to Alexa Internet**

[August 31, 1998] If ever the ad sales staff says there just aren't enough new sites to satisfy the clients, have them read this. [Alexa Internet](#) said about 1.5 million new pages are being created every day.

Free Web navigation service Alexa said the data was determined from statistics collected through its two-year archiving efforts.

To date, the company said it archived 12 terabytes of data, equivalent to more than half of all the contents stored by the Library of Congress.

Some of Alexa's other findings:

- A current snapshot of the Web is 3 terabytes, or 3 million megabytes
- The Web doubles in size every eight months
- There are approximately 20 million Web content areas
- 90% of all Web traffic is spread over 100,000 different host machines.
- 50% of all traffic goes to the top 900 Web sites currently available.

Alexa said its robots crawl the Web to gather periodic text snapshots (a full sweep of currently available public Web content) and mines this data to provide site statistics and related links to users of the free Alexa service. Alexa also donates a copy of each snapshot to the non-profit Internet Archive, which is dedicated to preserving the World Wide Web for future generations to learn from.

"Alexa's archival efforts mean they've got more to say about the Web in general than any other Web data providers," said Chris Shipley, industry analyst and editor of DEMOletter. "This means businesses and organizations using Alexa's statistics and trend data are tapping a vast data resource pulled from the most comprehensive archive of documents 'born digital'--that is, electronic at conception and through publication--than any currently available source."

Alexa, launched in October 1997, has clients that include Netscape Communications, the White House, Gartner Group and Encyclopaedia Britannica.





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ORANGE COUNTY EDITION  
SEPTEMBER 14, 1998



**Bacon's**

3985-A

# Forget Forest Lawn—Live Forever on the Web

## CYBERSPACE

By ASHLEY DUNN  
TIMES STAFF WRITER

In the cosmic scheme of things, the human concept of forever is just a blink. Love is not forever. Beauty is not forever. Not even Microsoft is forever.

But in the last few decades, the human concept of forever has undergone a revolutionary transformation because of the rise of digital information. Digital data truly are forever. The information can be forgotten, destroyed or misplaced—and usually is. But with the proper will, it can also be eternal—an unchanging stream of ones and zeros that can stare at the breadth of human existence and not blink.

The movement to archive digital information is well underway with such undertakings as **Project Gutenberg** (<http://www.gutenberg.net>), which has converted nearly 1,000 books and historical documents into digital form. These so-called e-texts in the collection range from "A Child's Garden of Verses" to "Zincali, Gypsies of Spain."

Brewster Kahle, the inventor of the wide-area information servers, or WAIS, system, has been working on a mammoth project called the **Internet Archive** (<http://www.archive.net>) that has been storing every bit of the Web. It can find for future historians. He has already assembled about 4 terabytes of information—that's 4 trillion bytes—including a fascinating collection of 1996 election Web sites (<http://www.archive.org/smithsonian.html>).

There are extensive archives on the Inter-

net for just about everything from digitized photographs to historical software to MIDI music files.

The power of perfect digital reproduction has begun to shift the very concept of what is history, pressing it beyond the veneer of great documents, ruins and archeological finds into the realm of common life.

David Blatner, an author specializing in books on computer graphics, launched a project last year, *AfterLife* (<http://www.afterlife.org>), to archive the home pages of deceased Web surfers. The project got started after a friend named Irv Thomas (<http://weber.u.washington.edu/~irvthom/Realhome.html>) expressed his concerns about the fate of his Web site after he died.

Thomas, a 71-year-old Seattle resident, had been a programmer for 30 years, but abandoned that work to write and philosophize about life. He published a book about his European travels on his site and archived an intermittent journal of personal musings, called "Ripening Seasons." Like many others on the Web, he had come to see his site not as just a collection of random links and pet pictures, but an expression of his life and experiences. It was as much an artwork as Da Vinci's *Mona Lisa* or Thoron's "Walden."

What Thomas had confronted was the other edge of the digital sword: While digital information can be preserved forever, it also can be frighteningly easy to destroy. A single misguided keystroke or a missed Internet service payment, and a few megabytes could be lost forever.

Blatner saw *AfterLife* as a relatively inexpensive way of extending archival care to the creations of the common man.

After more than a year of sporadic volunteer work, *AfterLife* is still more a concept

than a reality. Archiving forever is much easier said than done, requiring a steady flow of funds, which Blatner does not have, and a commitment that will far exceed his life span.

Blatner added that he is also unsure of what should be archived and what should be left to fade into the virtual ether. Should pornography be archived? Should hyperlinks be maintained? Should there be size restrictions? Should obituary-style memorials be allowed? Will HTML have any meaning in the future?

Whatever the answers, the basic idea of using the virtual world to capture pieces of our real-world lives has an undeniable appeal.

There are at least 25 sites now on the Internet that allow users to post virtual memorials on the Web. Most of the sites are connected to funeral homes or cemeteries.

It seems unlikely that many of these virtual memorials will get within even a few cents of forever. But Sharon Mnich, a Georgia Web designer who started the first Virtual Memorial (<http://www.virtual-memorials.com/>) in 1996 as a way to commemorate her grandparents, said the meaning of these sites is really not about eternity, but about the living and the here and now.

"The virtual memorials offer a way to celebrate the dash between two numbers on a tombstone," said Mnich, whose free site now lists more than 1,000 people. "That's all there was room for before. I can see these memorials becoming a standard part of life in the future. It can change a morbid part of life into a celebration instead."

Please send Internet site suggestions to [cutting.edge@latimes.com](mailto:cutting.edge@latimes.com).



## PBDJ READERS RESPOND TO OUR OPEN LETTER TO SYBASE

you hit the nail  
on the head!

Your open letter to Sybase in the August 1998 issue of *PBDJ* hit the nail on the head when it comes to Sybase's commitment to *PBDJ*, and PowerBuilder for that matter. I have been a PowerBuilder developer since version 2.0 and was one of the first subscribers to *PBDJ*. Since 1993, *PBDJ* has been my primary source of reference and quality articles that have helped me advance my career. It's a travesty that Sybase has decided to drop its support for *PBDJ*. Before Sybase took over Powersoft, I had close relationships with many of the fine developers and staff in Concord, Massachusetts. I was truly impressed with the dedication, excitement and pride that the Powersoft folks displayed in those days. Since Sybase's reign, those qualities have diminished to the point where it seems that they couldn't care less if PowerBuilder survives. Sybase has repeatedly displayed its lack of good judgment over the last two years by not supporting us, the developers and lifeline of PowerBuilder.

I've dedicated the last five years to promoting and supporting Powersoft tools. I am a CPD professional, CPI and a certified Sybase DBA. I've spent hundreds of hours in the Powersoft and CompuServe forums helping support the tool. I made my commitment to Powersoft and Sybase long ago. But seeing what they have done to the Powersoft tools division, as well as their total incompetence when it comes to managing the once vital relationship with *PBDJ*, just takes the wind out of me. It seems they have turned their backs on the people who make a difference in whether their product lives or dies. Kudos to Sybase, yet another stupendous marketing decision made. When will Sybase learn? Will it take the death of PowerBuilder to finally wake them up?

I'd like to thank the wonderful people at Powersoft; we know you're not at fault and you have been absolutely fantastic to work with over the years. Thanks to *PBDJ* for stepping forward and taking a stance. It's about time the readers of *PBDJ* and the PowerBuilder community did!

**Anthony M. Perugini**  
President, Forte Information Systems, Inc.  
www.ConsultForte.com



An enthusiastic *PBDJ* reader shows his support at the Powersoft Conference with his "World Tour With *PBDJ*" bag. He still proudly carries this memento from the *PBDJ* World Tour training seminar series, three years ago!

Sybase must do a  
complete 180

I'd like to preface this letter by saying that some of the first tools I seriously developed with came from Sybase/Powersoft. I have over four years of Sybase DBA experience involving administration, development, data warehousing, replication and middleware. I have over three years of PowerBuilder experience ranging from class library development to 100+ pbl distributed PFC applications. I have designed and deployed over 300 databases, 15 data marts and three data warehouses using S-Designer/PowerDesigner. During the course of all this development, I have used every tool and component in Sybase/Powersoft's portfolio. I have also accounted for many millions of dollars in sales of Sybase/Powersoft products. During the time I spent developing, specifying and deploying Sybase/Powersoft solutions (note the past tense), I have endured quite a few things. Sybase does not support its developers. They don't market their products effectively....[I]nformation concerning future products or directions has been nonexistent. They don't support their certification programs or those who earn certification credentials. Yet they expect us to just come to them and purchase tools to solve all our problems. Their technology is good in most cases. Integration is horrible and support is nonexistent. One case in point: Our company purchased a copy of System 10 for NT to do some development for one of our clients. We did not purchase any technical support contract. Two months into the development we encountered a serious memory leak that had a serious impact on our development efforts. After spending nearly 40 hours on the problem and after dozens of phone calls, we found out this was a known bug and that a patch was available. This bug was known about prior to our even purchasing the copy for development. The problem was that the patch was available only to those customers who had purchased a technical support contract. Even though they

had sold us a product known to be defective, they refused to fix it unless we paid them. This was the last straw for me. At the time this happened I was just beginning to get a taste of Microsoft's support and products. The technical support fiasco we went through was the point at which I made the decision that Sybase/Powersoft tools would no longer be on my list of supported or recommended products. Let me give you a breakdown of what Microsoft has provided for me, free of charge, that does not exist with Sybase/Powersoft.

1. It actively promotes its certification programs and provides quite a few benefits to those who achieve various certifications.
2. MS provides free magazine subscriptions, free TechNet and MSDN subscriptions, and a certain number of free premium tech support calls for various levels of certification.
3. Education is actively promoted and available at hundreds of sites around the world.
4. All of their product documentation is available free on the Web and also on CD via a subscription service.
5. Their Web site contains thousands of pages of product information, techniques, white papers and training to support all of their products.
6. Various mailing lists are available to keep people up to date on all development efforts, schedules and directions.
7. The beta program is essentially open to everyone - first come, first serve.



Bill Bartow



Steve Clark

## Who Is Responsible for All This?

Bill Bartow and Steve Clark of Sybase can take most of the credit for PowerBuilder's recent successes and failures. Bartow and Clark were also part of the team that masterminded the "PowerStudio" marketing idea, which minimized PowerBuilder's importance among other Sybase tools. This marketing campaign was launched at the 1997 Powersoft Conference in Nashville, Tennessee, a year ago and the results were observed at this year's Conference in L.A. Bartow is also one of the people who refused to support *PBDJ*.

8. They provide heavy advertising in hundreds of publications.
9. They subsidize dozens of publications devoted to their tools and technologies.
10. They even produce a few publications.
11. Solution providers receive copies of all products for use in development and education. (The only restriction is that they can't be used to generate income.)
12. Solution providers are actively promoted to businesses.
13. Every patch, bug fix and various add ons and upgrades are available free of charge to anyone.
14. Technical support can be accessed free of charge for a wide variety of products.
15. Hundreds of education seminars and functions are run by Microsoft each year.
16. They provide a wide array of products that have virtually seamless integration. (It is very easy for me to construct solutions utilizing a dozen different tools without any custom tools or the need to write customized code.)

I could probably continue the list, but I believe Sybase/Powersoft is keenly aware of all of these deficiencies. Microsoft does not have the best-of-breed tools in most areas, and I freely admit that. What they provide is unparalleled support. Microsoft has realized one thing that continues to elude Sybase/Powersoft. We, the developers and implementors of their products, hold the company's future in our hands. Microsoft has gotten where it is

because they have encouraged and supported their developers on a scale that is unmatched in any industry. I am much more likely to implement a solution that I know my clients can get tremendous support for. I am also much more likely to work with a company that will provide a large amount of support for my efforts.

If Microsoft took the same approach that Sybase/Powersoft does by not supporting the people who buy their tools, they would not be in the position they are, regardless



SYS-CON vice president of marketing Carmen Gonzalez and radio host Robert Diamond introducing SYS-CON Radio in Los Angeles.

of technology. I'm sure Powersoft remembers a company called Gupta. They have fallen into the same mindset as Gupta - build it and they will come. They will not come. Companies are not looking for a whole pile of best-of-breed tools. They are looking for a set of tools that will continue to evolve, are widely supported and will integrate with each other. Has anyone at Sybase/Powersoft REALLY tried to put together a solution that has PowerBuilder talking to Jaguar, which puts data into Adaptive Server? If they have, I'm certain they would never have released the set of products until they had done some serious reworking. I use Microsoft as an example here. The same can be said for Sybase/Powersoft's other major competitors, such as Sun with Java and the promotion and support they offer to the developer community, or Lotus/IBM with Notes/Domino and the wealth of resources available from them.

From working in and watching this industry for the last 20+ years, Sybase/Powersoft is on the fast track to nonexistence. Meanwhile, Microsoft is sitting at the next crossroads where some of their tools begin to push into the best-of-breed category. While it doesn't have some of the features, I have specified Visual Basic or Delphi over PowerBuilder mainly on price, support and usability. For transaction servers I wouldn't consider specifying anything other than MTS for its seamless integration with the 95% of applications in existence. On the database front, anyone at Sybase that has had the opportunity to work with the beta of MS SQL Server 7.0 should be very scared. I find it amusing that quite a few features I've seen in Adaptive Server are ones that existed in MS SQL Server 6.5. (Can you say xp\_cmdshell?)

Sybase/Powersoft must undergo the most dramatic change possible within the next six months or they will fade rapidly from the landscape. What are my predictions? MS SQL Server 7.0 will be released in Q1 1999. Visual Studio 6 will be released in Q4 1998. Many advanced features will be available for NT in SP4 by Q4 1998. Upgrades to most other

MS products will be released by Q1 1999. Sun will succeed in pushing Java into widespread server-side development by Q1 1999. Lotus/Domino will release major upgrades to their flagship products that offer greatly enhanced functionality and interoperability with a wide range of tools and technologies. Oracle will release a minor upgrade to Oracle8 that solidifies and enhances the features already available. By June 1999 sales of Adaptive Server will essentially cease. By December 1999 Sybase will be in Chapter 11 bankruptcy from which they will not emerge. We, the developer community, have been telling Sybase/Powersoft for years that they have to fix their company, eliminate all of the marketing blunders and support the people that use and sell their products. They have failed to do the one thing all companies need to do - listen to their customers. Due to this failure, they find themselves at a critical juncture. Many of their most talented developers have left or been cut from the company. All of their competitors have passed them by and are completing product strategies that will cut Sybase/Powersoft from the market. Sybase/Powersoft has one last chance in this new world of IT. They must do a complete 180 of their operations over the next six months or risk the very real possibility of going out of business.

## Mike Hotek

Rolling Meadows, IL  
[www.swynk.com/friends/hotek](http://www.swynk.com/friends/hotek)  
 SYSPB PBDJ Forum ([www.sys-con.com/pbdj](http://www.sys-con.com/pbdj))  
 Member Worldwide SQL Server User's Group  
[www.swynk.com/sswg](http://www.swynk.com/sswg)  
 Modern Business Technology, LLC ([www.mbtinc.com](http://www.mbtinc.com))

## a disappointing lack of support

I hadn't noticed just how little support you'd been receiving from Sybase until I read your letter. That brought to mind the fact that I came to know about PBDJ only because you've been at the Conference each time I've attended. I received no subscription form in PB 5.0 or 6.0. It's a good thing you're present at the Conferences.

I find it disappointing that Sybase is not supporting your publication. I have received a lot of helpful information from PBDJ that is nowhere to be found in the PB Documentation. Product Reviews, Slick Tricks, Migration Assistance, etc., have all made developing in PB more enjoyable. I would think Sybase would have liaisons working directly with you so that the channel between Sybase and their customers would remain (or become) smooth-flowing. They should encourage people to read PBDJ and advertise their products and services in it.

Regardless, as long you continue publishing useful information, I will continue reading PBDJ. It's just a shame that so many other potential readers are missed because of the lack of support from Sybase.

## Tom Peters

Pepsi-Cola IT  
[tom.peters@pepsi.com](mailto:tom.peters@pepsi.com)

## PBDJ Announces Support for "PowerBuilder Lobby"

Founder and president of SYS-CON Publications, Inc., publisher of PBDJ and JDJ, Fuat A. Kircaali recently met with the presidents of "PowerBuilder Lobby" and "Java Lobby" and announced full support of their activities (JDJ, vol. 3, issue 8). PowerBuilder Lobby is an independent organization that aims to protect the interests of PowerBuilder developers and companies with significant investments in PowerBuilder. Since last January, PowerBuilder Lobby has tried numerous times to reach Bill Bartow and Steve Clark of Sybase, Inc. Neither responds to countless attempts to discuss PowerBuilder Lobby's concerns over PowerBuilder's future. PBDJ interprets this behavior as indifference on the part of Sybase.



# Script Junkie

BY BRYANT CURREN



## Guests on a New Frontier

Urseland Software's Frontier is one of the more unusual programming environments out there. It originated on the Macintosh, as a sort of competitor to AppleScript. Since then, this unique combination of database and scripting language has been adapted into a Web-site building tool, a CGI engine, and more. In 1998, Urseland ported Frontier 5.0 to Windows 95, in a related development, after two years of success in the free software market Frontier is going commercial with the release of 5.1 (Visit [www.scripting.com/frontier5/](http://www.scripting.com/frontier5/) for product information).

One of the multitude of features in Frontier is an easy interface for writing CGI programs. To illustrate its use, I've created a simple guest book. The complete listing is reproduced in Listing One. This guest book doesn't have any spectacular bells or whistles; the script, however, demonstrates the features that differentiate Frontier from any other scripting language available.

Before we can dig into the script, however, we'll need to understand some of the internals of Frontier. Everything one does with Frontier begins with the Frontier database. The basic concept behind the database is simple; at the top level, it's just a table. Any table in the database can contain any of the data types Frontier understands, including the table data type itself. Other data types include the usual programming language data types, like strings, doubles, and Booleans; there are also data types for word-processing text, scripts, and pictures.

To get an idea of how Frontier uses this information, we can look at the `system` table, which is one of the tables in the root of the database. Within the `system` table, we find the `verbs` table. Inside the `verbs` table, we discover the `strings` table, and the `strings` table contains one `script` item for each string function in the scripting language.

And yes, if we modify any of those script items, we'll be modifying the scripting language itself. Frontier users get a dizzying degree of hands-on control over the language. But it's not just the language you find in this database; you can also find the tables that define Frontier's menu items, a table for the pages in Web sites you build with Frontier, and much more.

Figure 1 shows a bit of the Frontier database, with some tables expanded to show their subtables.

## Creating a New CGI Script

To add a CGI script to the Frontier object database, we need to open the table `user_webserver_cgis`. The " " is a Frontier convention; that string can be translated as "the item named `cgis` in the item named `webserver` in the item named `user`." Any script item placed inside that table is accessible as a CGI. (Frontier is capable of running as a stand-alone Web server as well as working with Macintosh and Windows Web servers;

unfortunately, discussing how to run Frontier CGI's from a Web server is beyond the scope of this article.)

After we've created a new script item and begun to edit it, we return (mostly) to a more standard environment. Once we get used to the fact that the script editor uses an outliner paradigm (having to do with the background of its primary author, Dave Winer), it starts looking a lot like normal code. Note that the brackets that delineate program structure in Listing One were automatically added when I cut the code out of Frontier, for clarity: under normal operation, program structure is defined by indentation, much as it would be in Python. The same thing goes for semicolons. Also, comment lines start with `<<`. It looks like two `<` symbols, but it's actually a single character.

### Initialization

Line 1 defines a function; for CGIs, the name of the script item must also be the name of the function it contains. The parentheses define the argument list. Frontier is not strongly typed, at this

[illegible]

Figure 1: Excerpts from the Frontier database, with some tables expanded to show their subtables.

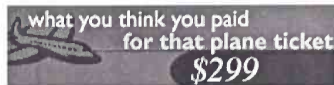






Sep. 1, 1998 &gt;&gt;&gt; 12:38 am GMT

Sci-Tech



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## Study Estimates Web Grows by 1.5m Pages Daily

NewsBytes

31-AUG-98

By Martyn Williams

SAN FRANCISCO, CALIFORNIA, U.S.A., 1998 AUG 31 (Newsbytes) -- Just how fast is the Internet growing? Alexa Internet, which maintains a Web cache and database, says a survey of its database indicates an average day sees 1.5 million pages added to the World Wide Web.

The same survey also estimates the current Web is around 3 terabytes and doubling in size every eight months.

Alexa maintains a database of Web pages as part of the service it offers to users of its free Alexa service. Delivered through a small application, the service offers Web users additional information on each site delivered, such as site owner, popularity, server speed and site size.

In addition, it offers a solution to those annoying "404 - Not Found" messages by allowing users the ability to call up the most recent copy of a page from its database. It is this database that the service examined to come up with the figures outlined in its new report.

Other factoids found by the survey include the information that 90 percent of traffic is concentrated on 100,000 different host computers, while just 900 Web sites account for 50 percent of all Web traffic. It also estimated there are 20 million content areas, defined as top-level pages of sites, individual home pages, and significant subsections of corporate Web sites.

More information on Alexa and its browsing companion software can be found on the World Wide Web at <http://alexa.com/>.

Reported By Newsbytes News Network: <http://www.newsbytes.com>





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## M I S C E L L A N Y

# THE SOUL ENCODED

Software that thinks it knows you

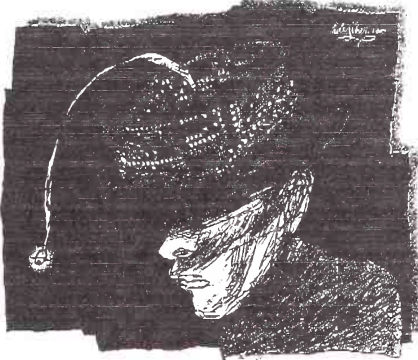
By Steven Johnson

Somewhere deep within an office in The Presidio of San Francisco, shuttered against the contaminants of dust and static, a robotic device connected to a supercomputer darts in and out of a miniature cityscape of digital tape drives. The assembled machines resemble an eight-track cassette jukebox, but the underlying technology is a touch more advanced: the supercomputer itself is approximately six thousand times faster than today's standard-issue PC, and the tape drives can hold over twenty terabytes of information, the equivalent of seventeen million books.

You'd think a processing superpower like this would be off-limits to everyone but grad students, millioners, and astrophysicists, but the surprising truth is that you can tap the cognitive resources of this machine via an ordinary Web connection, as thousands of casual surfers do every day. With all that horsepower at their disposal, you might ask, what order of wisdom do these surfers seek? The mysteries of quantum physics?

*Steven Johnson is the editor in chief of the online magazine Feed and the author of Interface Culture: How New Technology Transforms the Way We Create and Communicate*

A grand master's sacrificial pawn? As it turns out, the robotic claw and the supercomputer are collaborating on an answer to a more basic question: how will we entertain ourselves next?



This contraption is the property of Alexa Internet, which was founded in 1996 by two thirty-something Net pioneers, Brewster Kahle and Bruce Gilliat. The company's primary product is a software tool called Alexa. While the software has received some attention for its ability to retrieve deleted Web pages, the most provocative thing about Alexa is its uncanny ability to recommend new Web sites based on your individual tastes and in-

clinations, as though the machine itself had somehow come to know you personally. "Uncanny," that is to say, in the original E. T. A. Hoffmann sense of *unheimlich*, the mechanical doll that feigns the delicate sensibilities of a princess and fools everyone along the way. Alexa can direct weather fanatics to obscure university-subsidized satellite images, or Devo fans to exhaustive discographies of the band's collected works, all without consulting the editorial judgment of a flesh-and-blood linkmaster. In the older, analog world of mechanical objects, we once called this phenomenon animism, the machine passing for a living soul. But in the world of software, it is known as "collaborative filtering."

Collaborative-filtering programs such as Alexa descend from the family of software known as "intelligent agents." Software agents have been an *idée fixe* of Silicon Valley visionaries for nearly a decade, ever since Apple first floated the idea of a Jeeves-like application that would dutifully schedule appointments, track down library records, and run interference with your digital creditors. But most attempts to bring the idea to fruition have been spectacular failures, sunk by cartoon-

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like anthropomorphs darting across the computer screen, pestering their masters with "helpful" tips.

Collaborative-filtering agents interact with humans in a more mild-mannered, largely numerical fashion. The software does three fundamental things: it collects data about your cultural tastes; compares that data with other profiles in its database; and then makes recommendations based on the resulting analysis. The agents are not limited to recommending Web sites: Barnes & Noble and Amazon.com use the technology to help online shoppers choose books, for example, and visitors to CDnow and MovieCritic can ask their computers to personalize suggestions for music and films. But can computers really replace humans as entertainment guides and cultural critics? What will happen to the texture and range of our culture if they do?

One of the first successful demonstrations of collaborative-filtering software came from Firefly Network, Inc., founded in 1995 and acquired last April by Microsoft for an estimated \$30 million. The "demo app" for Firefly was a music-recommending program assembled under the supervision of MIT Media Lab professor Patrice Maes. The program asked you to rate a handful of albums and then dutifully furnished a new set of titles that it "intuited" you might like. If you were familiar with some of the titles, you could rate those and ask for more recommendations. With each round of feedback, the agent grew subtler and more sophisticated, and its guesses grew more educated.

The logic behind collaborative filtering is more than you might expect. The agent assumes that people who have some interests in common will also share other interests, and that Web sites or rock albums—or books or movies or wines or operas—that have fans in common will share some general characteristics. The wager at the heart of the Firefly model goes something like this: if two thirds of the people who like Elvis Costello's *King of America* album also like Nick Lowe records, then a *King of America* fan is more likely than not to be a Lowe fan as well. Alexa follows a comparable

algorithm, tracking the surfing habits of thousands of individual users and looking for patterns in their trails. When you visit a given Web site, the software does a rapid-fire analysis of its database and returns with a short inventory of other sites to visit. I've noticed that many visitors to this site also visit these other sites, says the software. Perhaps you might like them too.

Collaborative-filtering applications require a massive amount of data for their recommendations to have any accuracy. If each title in the database has been rated by only a handful of people, there's simply not enough resolution in the numbers for anything useful to be extracted from them. Barnes & Noble's Firefly application performs tolerably well if you feed it mostly best-sellers, given that these books have already accumulated a significant body of ratings. (Of course, there's something absurd about consulting a high-tech oracle and having it tell you that you've just got to read *Cold Mountain*.) But consider the result of this query: an attempt to find books for someone who likes *Madame Bovary*:

*Summer Moonshine*  
 P. G. Wodehouse  
*The Night Crew*  
 John Sandford  
*Bastard Out of Carolina*  
 Dorothy Allison  
*The Murder of Roger Ackroyd*  
 Agatha Christie  
*The Code of the Woosters*  
 P. G. Wodehouse  
*Murder & Walking Spirits*  
 Robertson Davies

Watching the computer generate these lists is entertaining enough, and you can't help looking for some hidden justification lurking in the more unlikely picks. It's a stretch, but you can almost see *Bastard Out of Carolina* as a more brutal version of *Emma Bovary's* domestic angst, and *Roger Ackroyd*—at first consideration the real wild card on the list—grows more plausible when you remember that this was Christie's most postmodern mystery, in which the narrator himself turns out to be the killer (perhaps a variation on Flaubert's *Emma*

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Bovary, c'est moi!") But the links in-  
 variably grow strained, artificial. The  
 easiest way to appreciate the limits  
 of the technology is to picture saying  
 to a friend: "So you loved *Madame*  
*Bovary*? Then you must read P. G.  
 Wodehouse."

It's fun—and usually a little reas-  
 suring—to lampoon software's more  
 feeble efforts at imitating human dis-  
 crimination, and there's no question  
 that the hype balloons of digital vi-  
 sionaries could use a little deflating.  
 Yet collaborative filtering—at least in  
 its initial manifestations—has much to  
 recommend it. For one thing, it makes  
 no attempt to simulate human in-  
 telligence or consciousness directly. In  
 other words, you don't teach the com-  
 puter to read or listen to music; it sim-  
 ply looks for patterns in numbers—  
 sometimes called "pattern matching."  
 In fact, the "intelligence" of the agent  
 is really the aggregated wisdom of the  
 thousands—or millions—of people  
 who use the system. The computer  
 churns through the millions of ratings  
 in its database, looks for patterns of  
 likes and dislikes that repeat them-  
 selves, and passes its recommendation  
 on to the user. In this sense, the com-  
 puter is more of a traffic director than  
 a thinker: moving brief morsels of in-  
 formation from user to user, not unlike  
 the e-mail routers that send messages  
 across the Internet. For this reason,  
 collaborative filtering should be un-  
 derstood as a direct descendant not  
 only of the "intelligent agent" breed of  
 software but also of modern comput-  
 ing's founding fathers.

The dream of a technology that  
 would gather, share, and multiply col-  
 lective wisdom fueled many of the  
 Net's early pioneers: Vannevar Bush,  
 Ted Nelson, all those research sci-  
 entists who built the original Internet  
 backbone and then codified the stan-  
 dards of the World Wide Web. At its  
 best, collaborative filtering can be seen  
 as an extension of that original vi-  
 sion. "It would benefit society if we  
 could more easily reuse the knowl-  
 edge and experience other people have  
 gained about problems," says Parrie  
 Maes. "This is one of the ways that  
 we have built software agents—they  
 don't necessarily have any informa-  
 tion themselves about what you do  
 when you want to buy a car, but what

they do is monitor, and collect a lot of  
 information about people solving  
 problems, and then give you some of  
 that condensed information—and es-  
 pecially patterns that it finds among  
 many people solving that  
 problem."

Old-school humanists tend to find  
 something alarming in the idea of turn-  
 ing to computers for expert wisdom  
 and cultural sensibility. In most cases,  
 the critics' objections sound like a  
 strangely inverted version of the old  
 morality tales that once warned us  
 against animating machines: Goethe's  
 (and Disney's) "Sorcerer's Appren-  
 tice," Hoffmann's "Sandman," Mary  
 Shelley's *Frankenstein*. In the con-  
 temporary rendition, it's not that the  
 slave technology grows stronger than  
 us and learns to disobey our commands;  
 it's that we deteriorate to the level of  
 the machines. Smart technology makes  
 us dumber. Virtual-reality inventor  
 Jaron Lanier has argued this point re-  
 lentlessly over the past few years,  
 including in a much-discussed debate  
 with Maes on *Wired*'s Web site in late  
 1995. "I still think a culture influenced  
 by agents," he told me in an e-mail  
 correspondence, "would be improv-  
 ished by a subliminal process of hu-  
 man accommodation to shallow com-  
 puter representations."

The critique certainly has its merits,  
 and even among the Net communi-  
 ty—if it's still possible to speak of a  
 single Net community—intelligent  
 software remains much vilified in some  
 quarters. Decades ago, in a curiously  
 brilliant book titled *God and Golem*,  
 Inc., the computer scientist Norbert  
 Wiener argued that "in poems, in nov-  
 els, in paintings, the brain seems to  
 find itself able to work very well with  
 material that any computer would have  
 to reject as formless." For many people,  
 the distinction persists to this day: we  
 look to our computers for number  
 crunching; when we want cultural ad-  
 vice, we're already blessed with plen-  
 ty of humans to consult. Other critics  
 fear a narrowing of our aesthetic band-  
 width, with agents numbly recom-  
 mending what everyone else is listen-  
 ing to, all the while dressing their  
 recommendations in the sheep's cloth-  
 ing of custom-fit culture.

That said, it does seem a little silly



to resist the urge to experiment with the current cultural system, in which musical taste is usually determined by the marketing departments at Sony and DreamWorks, and expert wisdom comes in the form of Ann Landers columns and Psychic Friends. If the computer is, in the end, merely making connections between different cultural sensibilities, sensibilities that were originally developed by humans and not by machines, then surely the collaborative filtering model is preferable to the way most Americans consume entertainment, which is by obeying the dictates of advertising. Software such as Alexa isn't trying to replicate the all-knowing authoritarianism of Big Brother or HAL, after all: it's trying to replicate the folksy, communal practice of friends telling friends about an online magazine they might like or a good deal on a Ford Taurus. In an industry obsessed with slick futurism, there's an engagingly small-town Americana feel to all of this—even if the "friends" at issue are total strangers, communicating to each other over the distributed network of the Web. It's not an accident that Firefly jargon refers to users with similar tastes as "neighbors."

Small-town conservatism may sound like an unlikely sensibility for the latest in high-tech code, but the analogy is not as forced as it may appear. Just as the Gingrich Congress, and its acolytes in the business press, have argued for a devolution of centralized government, extolling the virtues of the market's creative anarchy, the software avant-garde has pressed for decentralized software applications, programs that get their smarts from the actions of thousands of users rather than just the central planning of a single programmer. What unites these two worldviews is the common theme of decentralization: the belief that systems that self-organize from below—creating themselves out of countless lower-level actions rather than top-down, hierarchical command structures—are intrinsically sturdier, more self-sustaining, and more generative than their top-heavy counterparts. Mass culture has traditionally forced information—and artistic taste—to flow down com-

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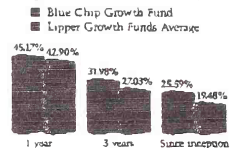
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mand lines rather than ripple upward. (This is one reason why Madison Avenue catchphrases like NBC's "Must See TV" and AT&T's "You Will" so often have an authoritarian bite.) Systems such as Firefly and Alexa—not to mention the Web itself—are supposed to offer a viable alternative to that top-heavy model. "The greatest structural impact of the Net is decentralization; things and people no longer depend on a center to be connected," writes long-time industry analyst Esther Dyson in *Release 2.0: A Design for Living in the Digital Age*. "It's worth stressing that although the Net can be used for good and bad (like most powerful tools), it is asymmetrical in the way it gives power to the powerless. That is, it undermines central authorities... and it helps dispersed forces to act together..."

These are encouraging words, to be sure. But in the end, the problem with Dyson's vision is not so much philosophical as it is empirical. Decentralized systems, as it turns out, do not always produce decentralized results; they're prone to what economists call "increasing returns." In market economies, increasing returns are a possibility in any system in which a product's value varies in direct proportion to the number of other people who are also consumers of that product. If a given product grows more appealing with each purchase, eventually it may reach a certain, hard-to-predict threshold (sometimes called a "tipping point") at which its popularity becomes self-generating: that is, people buy more because more people are buying.

For economists interested in questions of market efficiency, "increasing returns" is an issue of great contemporary import. (Not least because it offers the most plausible explanation to date for Microsoft's domination of the software industry.) But if intelligent agents become a significant factor in the formation of cultural taste or in the sharing of collective wisdom, then the issue will extend far beyond the economic think tanks and business schools.

Imagine the following scenario: a new book comes out, and ten people stumble across it through old-fashioned word-of-mouth or advertising. They

notify a software agent about the book and give it a high rating. The agent then recommends the book to a hundred people who have tastes in common with the original ten. If only a handful of the participants in the second round find the book appealing, then it will quickly subside back into obscurity. But if the book fares well in the second round, it can easily skyrocket: thousands and thousands of people will suddenly have the title recommended to them. For books that genuinely deserve the praise, this can be an incredibly powerful—and, in its way, progressive—state of affairs. (Think of Dyson's giving "power to the powerless.") Books that don't have huge marketing budgets or brand-name authors behind them can ride these feedback loops to a justified mass success. In a strange way, these systems echo what Jimi Hendrix and Pete Townshend and Lou Reed did with feedback and the electric guitar thirty years ago. They take a familiar sound—in this case, the time-honored tradition of word-of-mouth—and amplify it beyond recognition. Instead of telling a few neighbors about the latest novel you've read, you can now tell a thousand.

There's something intoxicating about that amplification, of course, but also something daunting. Great books might rise to the top more easily, but so might mediocre ones. As Lanier has argued so persuasively, intelligent software usually involves some kind of self-fulfilling prophecy, in which the aura of "intelligence" compels the human to project wisdom onto the agent's advice, even if it doesn't turn out to be all that wise. (In this respect, the decentralized agents of collaborative filtering aren't so different from the soothsayers of *Psychic Friends*.) It doesn't take much projection to nudge the recommending agent toward a tipping point: if people turn out to be twice as likely to enjoy something that they've been told they will enjoy—and the success of traditional advertising suggests that they will—then otherwise ordinary products will find themselves jettisoned into mass popularity, for no other reason than that they happened to stumble across a tipping point in their journey through the database. Of course, anyone who has been subjected to a Hootie & the Blowfish album will tell you that in-

sanely, popular mediocrity is nothing new, but Hootie haters can at least thunder against the P.R. departments and the coolhunters at MTV, who regularly toast schlock culture onto willing audiences. In the decentralized environments of collaborative filtering, it will seem as though the consumers brought the schlock on themselves, even though the real culprit, lurking somewhere in the deep math of the pattern match, will lie elsewhere: in the software itself and its propensity for increasing returns.

**P**attern seeking is already on its way to becoming one of the primary mechanisms in the great Rube Goldberg contraption of modern social life—as familiar to us as the more traditional devices of supply and demand, representational democracy, consumer polls. Intelligent software already scans the wires for constellations of book lovers or potential mates. (Firefly lore includes oft-told stories of married couples who originally met via the pattern matchmaking of the software itself.) In the future, our networks will be caressed by a million invisible hands, seeking patterns in the digital soup, looking for neighbors in a land where everyone is by definition a stranger.

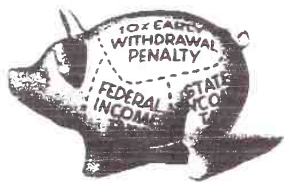
Perhaps this is only fitting. The evolutionary biologists tell us that pattern recognition is one of the earliest forms of intelligence. According to the "selfish gene" theory, an organism capable of recognizing its kin by detecting patterns in physical appearances possessed a unique evolutionary advantage over its fellow creatures: it could tell which sets of genes were worth protecting. Our brains got to where they are today by bootstrapping out of that primitive form of pattern matching; perhaps the software of today lies at the evolutionary foothills of some larger, distributed consciousness to come, like the Skynet network from the *Terminator* films that "became self-aware on August 29, 1997."

Some critics argue that computers will never reach the point where they can self-consciously emotive along with *Terms of Endearment* or savor the first chapter of Roger Ackroyd. Certainly the evidence suggests that genuinely cognizant machines are still on the

...distant technological horizon. Intelligent agents don't listen to music; they listen to numbers that we supply, and let us deal with the air guitar and the off-key warbling. On some basic human level, that feels like a difference worth preserving—and maybe even one that we won't ever be able to transcend, a hundred years from now or more. But is it truly a difference in kind, or is it just a difference in degree? This is the question that has haunted the artificial-intelligence community for decades now, and it hits close to home in any serious discussion of collaborative filtering. The computer doesn't listen to music; it looks for patterns in tiny pulses of electric energy and converts those patterns into information that is useful—or at least aims to be useful—to human beings. Surely this process is miles away from luxuriating in *The Goldberg Variations* or whistling along with Hanson.

But what is listening to music if not the search for patterns in the otherwise chaotic sound field that surrounds us every day? One tool scans the zeroes and ones on a magnetic disk; the other scans the frequency spectrum. What drives each process is a hunger for patterns, equivalencies, likenesses; in each the art emerges out of perceived structure. (Bach, our most mathematical composer, understood this better than anyone.) Will we ever feel fully comfortable taking our aesthetic cues from software? It's too early to tell. But in a world where the information that is accessible online is doubling every eight months, it is clear that some form of pattern matching—all those agents scouring the Net for signs of common behavior, relevant ideas, shared sensibilities—will eventually influence much of our media-saturated lives, maybe even to the extent that the pattern seekers are no longer completely dependent on the commands of the masters. And where will that leave the software then? What makes music different from noise is that music has patterns, and our ears are trained to detect them. A software application—no matter how intelligent—can't literally hear the sound of all those patterns clicking into place. But does that make its music any less sweet? ■

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### NOTES FOR "PLAYFAIR SQUARE—II"

The key-word is SWITCHBOARD

Anagrams are indicated with an asterisk (\*)

ACROSS: 1. K...eepe (rev.)-R; 6. car-no-Bitev; 11. Si(L...C...O...F; 12. gless); 13. we(s)...lley\*; 14. \*; 18. Pros...iects; 20. water-traps; 23. pe(a)-heln; 27. homonym; 28. I...eland; 29. m(I'd(rev.)-a)n; 30. G(O)dey\*; 31. ad-option; 32. hidden; 33. enrile\* DOWN: 1. dog(M.A.)s; 2. pun; 3. go-s(lowly)-sip; 4. ma-son; 5. \*; 7. A.C...er al; 8. res-weep; 9. B.O...Les; 10. f(nit)-ought; 13. proof (under water); 17. \*; 19. t-piece-r(rev.); 20. S-enary; 21. Red-at-E; 22. sh(A.D.)ow; 23. homonym; pun; 24. so-did(rev.); 26. \*

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Uncle Sam

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AT&amp;TCl

Caffeine gum



# Tomorrow Today

## December 1998

### Timber!

Canadian researchers complete an initiative to track the genetic fingerprints of yellow and red cedars. The Canadian Forest Service hopes that this tree-bank will help Mounties catch and prosecute rustlers, who make off with about US\$1



billion annually from the sale of the country's timber. Law-enforcement officials will soon take DNA samples from everything from a log to a pine needle to determine whether the wood was harvested illegally.

## Winter 1999/2000

### Smart Fridge

Households switch on the first Web-enabled refrigerator, created by Okayama's V Sync Technology. Connected to the Net via high-speed cable networks, the IP cooler lets home owners send email, order groceries, or check their local garbage-collection schedule. The door is graced with an LCD touchpad running 24-7 over Windows or the popular Linux OS. You can even watch cable TV on the screen - turning your icebox into an idiot box.

## RetrOS

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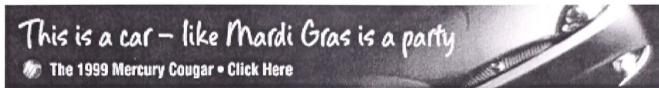
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## media circus under the covers

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### The St\*r Report

#### TABLE TALK

Are newspaper's just another business? Discuss whether we expect too much out of the press in the Media area of Table Talk



Are we turning critics into rating machines? Also: Jon Katz takes his Glorious New Media Revolution show on the road.

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BY JAMES  
PONIEWOZIK

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RECENTLY

Lashed by Lish

By David Bowman  
A former student  
emerges unscathed  
from the legendary  
fiction editor's  
writing workshops  
(09/01/98)

Diana: One year  
later, still dead

By Peter Kurth  
The anniversary of  
Princess Di's death  
brings yet another  
deluge of books  
seeking to make  
hay on the most  
covered event of  
all time  
(08/31/98)

Gear and loathing

By Mary Elizabeth  
Williams  
Gear, Guccione  
Jr.'s latest, strikes  
below the waist  
(08/27/98)

Will Mother Jones  
become more

politically correct?  
By Ashley  
Craddock  
The resignation of  
Mother Jones  
editor Jeffrey Klein  
sparks fears that  
the magazine will  
hew to a left-wing  
party line  
(08/24/98)

Repeat offender

By Tom Mashberg  
A fellow Boston

For all those bleary-eyed readers who have thrown up their hands in frustration after wrestling with the defiantly abstruse prose of a People "Picks and Pans" review -- the thick patches of untranslated German, the exhaustive footnotes, the digressive references to the early work of Wittgenstein -- relief has arrived. This spring, the magazine began giving its mini-reviews a "Bottom Line" tag: a few words that give readers the gist of the -- well, the gist -- that preceded them.

The insta-comedy book "Viagra Nation"? "Bottom Line: Potent humor" -- a whopping 98.4 percent savings in efficiency over the 125-word review. Vanessa Williams' "Dance with Me"? "An invitation worth accepting."

Absurd as it is to further encapsulate an already gel-coated brief, this innovation amounts to a defiantly literate, even quaint, statement. For People's Bottom Lines avoid the ubiquitous practice of summing up a review with a numeral, grade, star constellation, or arcade-style glyph. In these days of criticism by the numbers, People is defending *the word*.

I will not stretch human charity by expecting you to pity the critic. But consider this: What other writer is regularly expected to append his work with a shorthand tag to help people avoid reading it altogether? Always well-loathed, critics are suffering insults from all sides today: Their work is rendered diminutive by service-minded, catchy ratings systems and capsule reviews, superfluous by the customer forums and reviews for hire of merchants-cum-publishers like Amazon.com and even made automatic by online product-recommendation software.

True, in terms of sheer volume, this may be the golden age of criticism. Online media, for example, are effecting perhaps history's greatest transfer of wealth from deep-pocketed sugar daddies to scheming scribblers who, in a saner

newsman offers a scathing obituary for disgraced Boston Globe columnist Mike Barnicle, after he was finally scraped from the newspaper's hull (08/20/98)

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economy, would be safely penning letters to the editor in their basements.

But from the standpoint of critics' actually being read, the prognosis is murkier. A populace with widening entertainment choices needs opinions by the busload, and it gets them in the form of Zagat's and Wine Spectator's numbers, Rolling Stone's stars, Michelin's toques and Entertainment Weekly's grades. In other words, *ratings* are more in demand than ever; it's the *reviews* we can do without. And while for the few lucky, well-branded Eberts among us, a famous rating scale can be a gold mine, the great, indistinguishable horn-rimmed masses are in danger of becoming the elevator operators of media: vestiges of a bygone era, whose presence lets you know you're in a classy joint, but who do little more than push the numbers.

Check out, for example, the music-rating chart in the new Gear magazine; a variation on the classic 4-star system, it uses road-sign icons of little men:

4 little men: "Most excellent. Buy, buy, buy."

3 little men: "Very good. Invest if you can."

2 little men: "OK. Proceed with caution."

1 little man, wielding a shovel: "Shit."

Whatever this system says about Gear's tits-and-assets men's-mag ethos, it tells even more about criticism today, because it unapologetically admits its purpose is simply to tell us -- in an efficient way -- what to "buy, buy, buy." What's more, it essentially says that there is only one grade of album not worth buying: "Shit." Believe it or not, even a music critic, forced to use this all-or-nothing scale, is going to think hard before dropping doody on an artist in a national magazine. And in fact not one album in Gear's first issue wears the mantle de merde: Buy 'em all,

immediately, tomorrow or eventually.

If reviewing is now in a standoff of service vs. criticism, text vs. numbers, elitism vs. populism, the trenches may be the pages of online stores like Amazon.com; there, hired-out pseudocriticism shares space with (mostly positive) excerpts from popular magazines and do-it-yourself customer crits. Place of privilege goes to the composite star ranking tabulated from customer reviews. And while highlighting the voice of the masses may be aw-shucks egalitarian, it's useful for a seller too, since, decent folk that the masses are, they tend to ladle the stars more generously than the cold-hearted pros. Squirrel Nut Zippers' "Perennial Favorites" earned faint praise like "Less could have been more," "Good, but also disappointing," "Not 'Hot,' but rather lukewarm" -- yet these three customers give the CD four stars out of five, which, at this writing, is also the record's overall composite rating.

Still, even Amazon's innovation requires someone actually impassioned enough to press the "send" key; for a true dictatorship of the proletariat, criticism must be automated. And in the September Harper's Steven Johnson looks at the next step in electrocriticism: online pattern-seeking software like the music-recommending Firefly and the Web utility Alexa, which draw on vast databases to tout albums and Web sites on the basis of the earlier choices of users with similar tastes. Johnson has taken up the topic repeatedly in FEED, where he hailed Alexa as a return to the bottom-up model of the Web as universal mind; in Harper's, he adds the caution that such technologies could be snowballing, self-fulfilling opinion makers (as, say, political polls can) -- just a different way to "foist schlock culture on willing audiences." Indeed, a system like Firefly's is the sort of thing that could only seem like a godsend to someone with more brains than social skills -- anyone who thinks that a total system of peer-group feedback will reward artistic innovation obviously skipped

junior high. Cast one way, pattern seeking is a communitarian dream; cast another, it's philistinism as algorithm. Firefly doesn't know much about art, but it knows what we like.

But if critics are someday supplanted by search utilities and kibitzing online "neighbors," they -- or their editors -- will have paved the way. For these mechanisms are the logical, idealized extension of slapping numbers on subjective writing: criticism as a massive, searchable, compilable, multifunctional database. Quantified reviews aren't just reader-friendly anymore; more important for new-media purposes, they're machine-readable. I can already go to the New York Times' New York Today site and order a list of restaurants by star rating in any neighborhood, whereas in the newspaper I have to at least pass an eye over Ruth Reichl's foie-gras hosannas before skipping to the lowdown. (Possibly the most informative, literate New York restaurant resource online, in fact, is the amateur site run by lawyer Steven Shaw, who explains why he avoids star systems on principle.)

Granted, the fiction that complex critical judgments can be reduced to stars or bananas or whatever is often a useful one: If I can see in a half-second that a critic I trust hates "54," well, more time for me to do the crossword. But taken to its logical extreme -- and why should the geniuses of new media take a marketable concept anywhere but to extremes? -- critique-by-numbers could someday give us an exaggeration of today's two-tiered criticism system: Lane and Menand holding forth for the toffs, instant pattern recognition for the proles. Chris Bray, in the August Critics' Issue of Requestline, hopes that trends like the customer criticism at Amazon.com will, at best, free critics to concentrate on deeper matters: "The two-paragraph review can and should be shuffled off to the customer forum." In the same way, maybe online media's tendency to blurbify and quantify will at least draw a permanent line between recommendations and real



criticism. But will anyone put down the platinum card long enough to notice?

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**... That has such writers in't!** You'd think someone who spent three years writing on media and information technology for a self-anointed cutting-edge Web site would be the last person to use a musty phrase like "In the brave new world of Web media ..." to begin his final column, but that's why you're not Jon Katz. After his tenure of bringing such old-media prose stylings to said new world, Katz signs off graciously and gratefully in what he describes as an amicable parting with HotWired; the resolutely independent-minded, often hyperbolic ranter concedes, "The quality of my work was sometimes uneven" (he's too modest -- an uneven body of work is by definition *always*, not *sometimes*, uneven). Perhaps the most interesting aspect of Katz's last is that the frequently millenarian Web booster now admits, "We never became a political voice of a new culture" -- his yeomanlike work in support of the recent Digital Citizen poll notwithstanding. But let's not get carried away: The word "revolution" still appears thrice in his final piece. Fear not, though, lovers of Katziana. The columnist intends to bring his red flag and bandolier to a Web site near you, noting that he has already had talks with a couple. Be brave, new world.

SALON | Sept. 2, 1998

James Poniewozik's Under the Covers column runs in Media Circus every other Wednesday.

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In addition, it offers a solution to those annoying "404 - Not Found" messages by allowing users the ability to call up the most recent copy of a page from its database. It is this database that the service examined to come up with the figures outlined in its new report.

Other factors found by the survey include the information that 90 percent of traffic is concentrated on 100,000 different host computers, while just 900 Web sites account for 50 percent of all Web traffic. It also estimated there are 20 million content areas, defined as top-level pages of sites, individual home pages and significant subsections of corporate Web sites.

— Martin Williams, Newsbytes

### US West, CWA Reach Tentative Agreement To End Strike

The Communications Workers of America (CWA) and US West have reached a tentative agreement on a new three-year contract, both parties said late Sunday night. The deal ends a strike that began at midnight on August 15.

PHONE NO. : 415 896 1094

The proposed deal offers substantial wage and pension improvements, protects health care security and curbs excessive forced overtime, said the CWA, which will now put the deal to its 35,000-strong membership.

The deal thrashed out by the two sides includes a compound wage increase of 11.3 percent over the next three years and a \$500 ratification bonus, plus pension improvements of 22.4 percent compounded over three years, and the establishment of a committee to look into implementation of a lump-sum option.

It also offers an increase in the savings match to 75 percent next January and 81 percent the following year, and limits on excessive, forced overtime that restrict mandatory overtime in a week to 16 hours next January and to a maximum of eight hours in a week by January 2001, workers will be guaranteed at least two five-day workweeks per month.

"These were intensive negotiations over challenging and often groundbreaking issues," said US West in a statement. "The CWA drove a tough bargain. Nevertheless, we were able to reach a fair agreement that will work for employees

and the company and most importantly, for customers."

— Martin Williams, Newsbytes

### Web-Based Postage System Launched

E-Stamp Corporation ([www.estamp.com](http://www.estamp.com)), one of two companies now testing electronic postage systems, is offering a Web browser-based, no-hardware-required, online postage-buying system, authorized by the U.S. Postal Service (USPS) and aimed at small businesses.

E-Stamp Internet Postage was tested in both the Washington, D.C. and San Francisco Bay areas, the company says. E-Stamp's system is offered in two flavors: E-Stamp Internet Postage can be accessed from desktop applications such as Microsoft Word or from Internet browsers such as those from Microsoft, Netscape or America Online.

The company believes its scheme will be successful because customers don't need to download additional software or connect hardware to access the service.

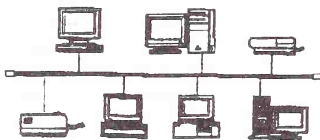
E-Stamp's Internet Postage also lets users print stamps on envelopes, labels or onto a document using a PC and standard printer.

E-Stamp secured a total of \$16 million

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**Document 3 of 7.**

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Computer Weekly

**September 3, 1998****SECTION: NEWS, Pg. 6****LENGTH: 449 words****HEADLINE: NEWSBRIEFS****BYLINE: Bill Goodwin****BODY:****Suppliers indifferent to date bug plight**

IT suppliers are ignoring the year 2000 needs of small companies, according to research by market intelligence firm Spikes Cavell & Co. The market for small- and medium-sized enterprises was misunderstood by the majority of IT suppliers, claimed the report. Most were focusing on large mission-critical software development projects. "It is a classic case of passing the buck," Spikes Cavell said.

**Just another page on the Internet**

More than 1.5 million pages are added to the Web daily, says new research. The Web is currently about 3 terabytes in size and is doubling every eight months, according to Internet statistics provider **Alexa Internet**. About 90% of Web traffic is handled by 100,000 host systems while half of all Web traffic visits just 900 Web sites, the research also found.

**Intel to show off entertaining new chip**

Intel will premier its next generation Pentium II processor next month. The chip - code-named Katmai - will be available from early next year, and is designed to improve the performance of 3D, imaging, audio, video and speech recognition applications. It will run at speeds of 500MHz. A spokesman for Intel said the microprocessor would bring enhancements to computer games first, but eventually would benefit corporate applications such as 3D presentations and architectural design software.

**JD Edwards pins success on Oneworld**

Enterprise resource planning software supplier JD Edwards last week reported post-tax profits up 150% to \$ 18.1m ((GBP) 11.3m) for its third quarter - up from \$ 7.2m for the same period last year. The company said better acceptance of Oneworld, its Unix and Windows NT-based package, was partly responsible for its jump in performance. The package accounted for 20% of the supplier's licensee fee revenue last quarter, compared with 11% last year.

**UK firms show investment nerves**

Most UK businesses are techno-sceptics who see little reason to invest in information technology, although a quarter expect to sell more products electronically within five years. A recent BT poll of 550 companies found that 59% of firms were frightened by the level of IT investment required to keep pace. One-third said they would spend any windfalls on technology and 45% said IT would give them competitive advantage.

**Bank expert warns of bug slowdown**

A NatWest analyst has joined the list of economists predicting that the millennium bug will slow down the world economy. David Kern, chief economist at NatWest's market intelligence group said the date problem will cut the growth in the UK economy from 2.4% to 1.9% in the year 2000.

[http://web.lexis-nexis.com/requester/  
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Document Listing

Friday, September 11, 1998

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**LOAD-DATE:** September 8, 1998

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MAGAZINE

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## FRIDAY REPORT

Garden City, NY

Circ - 1200  
Weekly

SEPTEMBER 4, 1998

**Bacon's**

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## WEB GROWS BY 1.5 MILLION PAGES DAILY, STUDY ESTIMATES

Alexa Internet, which maintains a Web cache and database, says a survey of its database indicates an average day sees 1.5 million pages added to the World Wide Web.

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Alexa maintains a database of Web pages as part of the service it offers to users of its free Alexa service. Delivered through a small application, the service offers Web users additional information on each site delivered, such as site owner, popularity, server speed and site size.

The survey also found that 90 percent of traffic is concentrated on 100,000 different host computers, while just 900 Web sites account for 50 percent of all Web traffic. It also estimated there are 20 million content areas, defined as top-level pages of sites, individual home pages, and significant subsections of corporate Web sites.





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DAILY NEWSPAPER

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STATE EDITION EDITION  
SEPTEMBER 7, 1998



**Bacon's**

# Let Alexa be your guide to more online sites

Alan Hoffman

SENIOR TECHNOLOGY EDITOR

Anyone searching for Web site recommendations doesn't have to look far to find them. They're everywhere these days: magazines, billboards, TV ads. The Web's most popular sites, the so-called "portals," from Excite to Yahoo!, draw millions of visitors on a daily basis looking for somewhere else to visit.

Why, then, should you consider downloading a special software tool designed to offer even more recommendations? For a simple reason: It's so smart, you'll think it's watching your every move (which it is, in a sense).

The tool, *Alexa*, will not put the portal sites out of business, but it may revolutionize the way people discover new sites on the Web. Released a year ago, Alexa is now gaining attention with a new version for Internet Explorer 4.0 for Windows, an agreement to integrate Alexa's "related sites" features into Netscape Communications Corp.'s browsers, and a thoughtful essay on the implications of the software in the September issue of *Harper's* magazine.

Alexa does something rather simple: It suggests sites as you surf the Web. The software, which is available for free at [www.alexa.com](http://www.alexa.com), adds a window below your browser where Alexa suggests links as you move from one Web page to another.

Take any website looking at

MSNBC. Alexa suggests other top news sites: CNN, ABC News, USA Today, and the New York Times. Visit [TheTrip.com](http://TheTrip.com), a popular site for business travelers, and Alexa suggests Microsoft Expedia, Travelocity and other travel sites. To see more sites than those listed at the bottom of the screen, select the "links" button, and Alexa will suggest additional sites.

Alexa doesn't suggest sites by keyword searches, like the search engine Alta Vista, or by creating a list of categories, like Yahoo! Those methods, while useful as a starting point, don't do a particularly good job of differentiating between the best sites and the worst — or even between popular destinations and obscure ones.

Unlike those sites, Alexa analyzes the material on the Web — and the ways people move from site to site — in order to suggest spots similar to the one you're currently visiting.

From machines based in San Francisco — and connected to users around the world — Alexa studies patterns of Web usage by Alexa users (it does so anonymously). Alexa also studies the text and phrase combinations appearing on Web pages to determine the similarities between pages. Combining its study of Web usage patterns and content analysis produces a continuously updated source of site suggestions as you move from one spot to another.

Give Alexa a spin, and you're likely to be impressed by its intelli-

gence." Suggesting news sites may not be that impressive, but Alexa works just as well, or better, with more narrow interests. Visit *Home-Shark*, a site for home buyers, and Alexa suggests other top destinations, like HomePath and CyberHomes.

Aside from its suggestions of related sites, Alexa offers a number of other features. A "stats" button leads you to information about how popular a site is, how many other sites have links to that site, and user ratings. (A "vote" button lets you say whether you like or dislike a site.) An "Archive of the Web" lets you find pages that are currently unavailable, assuming the page is stored in Alexa's archive.

As a piece of software, Alexa is easy to install and intuitive to learn. You do have to put up with a small advertisement as part of the Alexa toolbar — the service is ad-supported — but it's worth it, considering the valuable service Alexa provides.

## Site of the week

glassdog

[www.glassdog.com](http://www.glassdog.com)

Not your typical home page. Here's a multisensory playground from a talented Web designer, with "Design-O-Rama" (Web design instruction), "The Vacation Project" (fictional constructions based on random photos), and more.

## Live online

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Admission: Bacon

ing an independent contractor, from the author of "Working Solo." Tomorrow, 9 p.m., chat.yahoo.com  
GEORGE TAKEI — A.k.a. Mr. Sulu, from "Star Trek." Wednesday, 8 p.m., chat.yahoo.com

## NJO UPDATE

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### BEST OF THE WEB

Be the first to be the best Who's got the most powerful Web site in New Jersey's small business community? The New Jersey Small Business Development Center is looking for that killer site that pushes a business beyond its competitors. Enter your site or one you've seen in the Center's first "Best of the Web" Awards. Nominations must be made by Wednesday. <http://www.nj.com/njsbdc/contest/>

### DREAM BUILDER

Take the fast track to your dream House NJO's New Homes site offers the most powerful search of New Jersey's home-building. And now you get even more information with NJ Builder Pro, a database of Star-Ledger stories on new developments and amenities. <http://www.nj.com/newhomes/>

chips based on it hit channels around 2001, they will be in systems integrated at an unprecedented level, running at speeds today's technology cannot touch, the Texas company says.

TI will start new 0.07 micron chip design work in 2000 and volume production should begin in 2001. Among the new products TI predicts are tiny hearing aids that can be directly implanted in the inner ear, wireless telephones with full video screens and alphanumeric paging, built-in asymmetric digital subscriber line modems that bring fast Internet access to everyone, and hard disk drives that can read gigabits of data per second.

The products that use these chips will weigh less, be smaller, consume less power and execute software faster than anything seen today. About 1,000 times thinner than a human hair, 0.07 micron transistors will be tiny enough to fit more than 400 million onto a chip the size of a fingernail. They will run at speeds of 1 gigahertz (GHz) and higher with digital and analog functions fully integrated, the firm says.

TI says the new high-density 0.07 micron process is the first to be designed for analog, as well as digital, operation.

As such, they will be able to integrate mixed-signal functions with high-speed digital logic and cores.

— Craig Menefee, *Newsbytes*

### New Coalition Promotes Laissez-Faire High Tech

Calling for a government that governs less and better, the Technology Access Action Coalition formally announced its birth at a luncheon last week at the National Press Club in Washington.

According to the organization, "Recent actions by the federal government jeopardize the creativity and entrepreneurial spirit of this industry. Stifling the ability of technology companies to innovate and compete will hurt the economy and prevent the best solutions from reaching customers."

The TAAC's chairman is Vanstar Corp. President Jay S. Amato. Amato discussed what he sees as the highly beneficial contribution the technology industries have made to the economic and cultural life of Americans, indeed calling the high-tech field a "cornerstone of the economy."

However, he said, the "thousands of jobs across the nation and...billions of

dollars to the U.S. economy" essentially have been met with more regulation than ever before.

TAAC's mission, according to Amato's statement, will be to lessen the government's hold on what the sector of the high-tech industry can do.

— Robert MacMillan, *Newsbytes*

### Study Estimates Web Grows By 1.5 Million Pages Daily

Just how fast is the Internet growing? *Alexa Internet* ([www.alexa.com](http://www.alexa.com)), which maintains a Web cache and database, says a survey of its database indicates an average day sees 1.5 million pages added to the World Wide Web.

The same survey also estimates the current Web is around 3 terabytes and doubling in size every eight months.

Alexa maintains a database of Web pages as part of the service it offers to users of its free Alexa service. Delivered through a small application, the service offers Web users additional information on each site delivered, such as site owner, popularity, server speed and site size.

*continued on page 8*

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# Discovery worth every pixel of space it uses

Ferdinand Magelhaens' ship, the *Vittoria*, circumnavigated the globe in 1520-21.

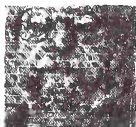
The great Portuguese navigator, better known as Magellan, was diverted by military operations in the Philippines. He was killed in action, so the 1st trip around the world was completed under the command of Sebastian del Cano.

In 1988 Bill and Larry Gross convinced Lotus to produce *Magellan*, a universal hard drive file indexer and explorer that should have revolutionized the computer world. Sadly, Lotus was diverted by other operations, and *Magellan*, like its namesake, didn't survive to reap its proper reward.

A few years ago Digital Equipment Corp. launched its powerful Internet search engine, *AltaVista*, still the best of its breed. It became so popular that DEC extended it into a separate *Magellan*-like product called *Discovery*.

DEC, of course, didn't survive either. It was gobbled by Compaq, under whose aegis *Discovery* is a free, though huge (11mb), download at <http://discovery.altavista.digital.com>.

*Discovery* doesn't quite ful-



fill the promise of *Magellan*. It does go beyond it, with capabilities that weren't on the map in the '80s.

I have too many toolbars cluttering my Desktop already—Lotus SmartSuite, MS Office, and Alexa—so I wasn't too pleased to find *Discovery* sticking yet another toolbar there. But it's worth every pixel of space it uses.

*Discovery* indexes (almost) every folder, file and word on your drive, which, with my 7.2gb drive, took about 2.5 hours. Once built, updating the index can be performed on demand, or scheduled at regular intervals.

I say "almost" because it didn't index my Lotus Word-Pro documents, though that format is listed in its configuration.

It works with Eudora and Outlook, but not Juno, and has some limitations with Pegasus mail. It is appropriately multilingual, though inappropriate-

## COMPUTING

BY JERRY MAIZELL

ly limited to Windows 9x/NT.

The distinguishing advantage of *Discovery* is its integration of web, e-mail and document searching. It indexes all the web pages you've browsed, or you may choose to have it keep track of only those you specify.

With one tool you can find all information on your drive relating to a particular search, wherever it resides (with the exceptions noted above, and probably others.)

*Discovery* displays its results in your browser, highlighting your keywords everywhere they appear in a document.

Equally useful, and perhaps more so in many cases, is the Summarize feature.

You may have found a document of several pages that you don't wish to read at the moment, but from which you need to get the gist in order to determine if it's worth reading. Just click *Discovery's* logo and



Bealriz Badikar

select Summarize from the drop-down menu.

One can set the parameters of the summary—how many sentences it should be, or a percentage of the original document—via a choice on the Options menu/General tab.

Your most recent 30 search inquiries (in simple, not advanced, mode) are saved for reuse in the current session, accessible from a drop-down box.

Despite its limitations, *Discovery* is incomparably better than Windows' Explorer and crippled Find utilities. Anchoring it on your Desktop allows most, if not all, the information hidden in the depths of your drives to surface at your command.

E-mail: [nnews@ibm.net](mailto:nnews@ibm.net);  
on the Web see [http://](http://members.tripod.com/~maizell/)  
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SEPTEMBER 14, 1998



**Bacon's**

3985-A

## Old Web sites never die — they just go offline

By J.D. BIERSDOERFER

The New York Times

**Q** What happens to abandoned Web sites? Do they stay on the Web?

**A** Orphaned sites are a sad thing, indeed. Ignored by its creator for whatever reason, a stranded page will just sit there until someone (or some program) deletes it from the host Web server.

In some cases, the company that is the host of a particular site will pull the plug if the site's creator neglects to pay the bills or to update the site over a certain period of time. A once popular page might be voluntarily shut down as its creator moves on to other things, leaving a dead end from another page that links to it.

The Internet Archive ([www.archive.org](http://www.archive.org)) is an organization that is trying to find, record and store a copy of every public document on the Web, dead or alive. The group's own site offers a link to a free program called Alexa,

## Q & A Circuits

which runs with your browser. If a dead page is in the archive, Alexa can show you what it looked like.

For a humorous look at pages that once burned brightly and then flickered out, visit Ghost Sites ([www.dioobey.com/ghostsites](http://www.dioobey.com/ghostsites)), an active page that chronicles inactive ones and is updated monthly.

This column invites questions about computer-based technology, by postal mail to Questions, Circuits, The New York Times, 229 West 43rd St., New York, NY 10036-3859 or by e-mail to [QandA@nytimes.com](mailto:QandA@nytimes.com). This column will answer questions of general interest, but letters cannot be answered individually.



September 14, 1998

## **Starr Report's Net Readers Not Interested in Smut?**

*By Rebecca Sykes*

The Internet bore up under the strain of increased traffic over the last few days as users accessed prosecutor Kenneth Starr's report on U.S. President Bill Clinton – and it seems that civic concerns, not prurient interest, were driving many surfers' browsing patterns.

Salacious details in the report released Friday afternoon, concerning allegedly impeachable crimes committed by the U.S. president as he sought to cover up an extramarital relationship, might seem to have been the draw. But a spokeswoman for one site which carried a fully searchable version of the report said that usage patterns show that people were interested in the whole document, not just the smutty parts.

Some users did search on words with sexual meaning, but "I wouldn't say that that's the outstanding thing that you would see from looking at the search logs," said Hilary MacPhail, director of enterprise marketing at Northern Light Technology LLC, a research search engine company based in Cambridge, Mass.

Rather than leapfrogging from one sexual word to the next, usage patterns show that most people began at the start of the report and chronologically read many of its sections before petering out and losing interest, according to MacPhail.

"If it's at the beginning of the report, that's where the traffic's heaviest," MacPhail said.

And traffic was definitely up, all around the Web.

CNN reported double the usual traffic on Friday, the first day the report was available, recording 340,000 hits per minute on Friday afternoon. The phenomenon was visible to Alexa Internet, which makes a browser add-on and consequently collects information anonymously about its users' Web activities.

"We saw flash crowds occur for CNN," said Brewster Kahle, president of Alexa Internet, which is based in San Francisco.

Alexa did not see more people than usual flocking to the Net. Rather, users were unusually concentrated on sites which carried the Starr report, according to Kahle. One in seven Alexa users, or around 15 percent, viewed the Starr report on Friday, and 38 percent of all government-site URL requests were for the report, he said.

Northern Light, which had the searchable version of the report,



anticipated increased demand and put the report on a special server. Usage spiked up around 10 percent as users attempted to wade through it, MacPhail said.

People's interest in the 445-page document undercuts the conventional wisdom which holds that people want breezy news snippets on the Web, not serious reports, according to Peter Krasilovsky, VP at Arlen Communications in Bethesda, Md.

"Clearly, where there's something as important as this, they're willing to go to great lengths," he said.

*Rebecca Sykes writes for the IDG News Service in Boston.*

**Site Search:**

[Webmaster](#)

Circ - 10 000  
11 Times/Year

SEPTEMBER 15, 1998



Bacon's

# Calendar

## September

21-24: Denver (Colorado Convention Center). **Electronic Commerce World 1998** promises to educate current and potential users of electronic commerce technology. Its theme is "Business Solutions Through Technology Integration." The conference will offer 70 educational sessions, industry leading keynote speakers, full-day preconference workshops, problem-solving roundtables, and an exhibit hall. Some of the topics to be covered include automated data capture; electronic data interchange; electronic catalogs; financial electronic commerce; and Internet and Web-based EDI.

Contact: Electronic Commerce World, 2021 Coolidge Street, Hollywood, FL 33020-2400, 888/E-COM-711, 954/925-5900; Fax: 954/925-7533; <http://www.ecomworld.com>.

## October

12-14: Washington, DC (Washington Hilton & Towers). **Online World**, sponsored by Online, Inc., is a national conference that focuses on how to find and use Internet content and services. According to the announcement, librarians, Internet researchers, managers, information professionals, and others attend the conference to hear respected searchers share their expertise. This year's keynote speaker will be Brewster Kahle of Alexa Internet, and the conference will offer dozens of sessions in six full tracks covering topics such as practical searching, intranet development, trends and technology, and resource management.

Contact: Online, Inc., 462 Danbury Road, Wilton, CT 06897-2126, 800/248-8466; Fax: 203/761-1444; [info@onlineinc.com](mailto:info@onlineinc.com); <http://www.onlineinc.com>.

26-29: Pittsburgh (Pittsburgh Hilton). The **ASIS 1998 Annual Conference** will examine information access and what it means in a global economy. Topics to be discussed include the following: Who will be the information producers of tomorrow? What will be the effects of the lack of quality control exercised by traditional publishers? What are the social effects of global information access?

A plenary session will be given by Hal R. Varian, dean of the School of Information Management and Systems at the University of California-Berkeley. His recent work has been concerned with the economics of information technology and the information economy.

Panel session topics include "Advances in Social and Organizational Informatics: Implications for Information Science," "Intellectual Property Hearings: 'Theories of Information Science,'" "Intellectual Property: An Oxymoron?" and "Accessing Full Text: Integrating Electronic Resources (SIG LAN)."

Contact: American Society for Information Science, 8720 Georgia Avenue, Suite 201, Silver Spring, MD 20910, 301/495-0900, [asis@asis.org](mailto:asis@asis.org); <http://www.asis.org>.

## November

1-5 Monterey, California (Monterey Conference Center, Doubletree & Marriott

Hotels). **Internet Librarian '98** is a mixture of leading-edge ideas and tools as well as exciting new services—all focused on information professionals and Internet-related technologies. It features over 100 dynamic speakers in three simultaneous tracks each day, plus 24 workshops, two evening sessions, and the new **Internet@Schools '98** conference. According to the announcement, **Internet Librarian '98** covers metadata and Web tools, Internet and intranet content, creating Web sites, intranet case studies, managing knowledge assets, training and instruction, virtual services, digitizing resources, infrastructure, Web management, Net trends, and more. Session track topics include metadata, content, learning, searching, Web sites, transitioning, and virtual services. The exhibition hall will feature over 80 booths offering visitors a choice of products covering aspects of Internet, intranet, and library technology.

Contact: Information Today, Inc., 143 Old Marlton Pike, Medford, NJ 08055-8750, 609/654-6266; Fax: 609/654-4309; [custserv@infotoday.com](mailto:custserv@infotoday.com); <http://www.infotoday.com>.

8-10: Washington, DC (Willard Inter-Continental Hotel). **30th Anniversary Information Industry Association (IIA) Annual Conference** will aim to open a window on the industry's future. This year's theme is: "Redefining Content: Partners and Profits in the New Millennium." According to the announcement, some issues to be discussed at the conference include whether the mostly free Internet is the right context for premium in-

formation, whether syn-  
dication will increase value  
with millions of users  
Internet's librarians  
aren't tracking up to val-

Time magazine's  
Walter Isaacson will  
give a opening address  
day November 9.

Contact: Information  
Today Meetings Depart-  
ment, 143 Old Marlton  
Avenue, Medford, NJ  
08055-8750; Fax: 609/654-4309;  
<http://www.iiameetings.com>.

## December

8-10: London, U.K.  
Olympia Conference  
Center. **Online Information  
Exhibition**, sponsored  
by the Information  
Industry Association, L.  
information industry  
according to the anno-  
uncement, **Information 98** will  
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and the Web, finding a  
edge management, in-  
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formation Today, Inc.,  
143 Old Marlton Pike,  
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Fax: 609/654-4309; <http://www.iiameetings.com>.



STA-80

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## Resources

...To put more direction in your web travels, try **Alexa**, free for download at [www.alexa.com](http://www.alexa.com). This desktop utility sits at the bottom of your web browser and gives you extensive information on the site you are visiting and recommendations on sites with related content. You can search through their archives to find pages that no longer exist and locate websites by subject on the *Encyclopedia Britannica* site.

... **Steinberg North America** has moved their website to [www.us.steinberg.net](http://www.us.steinberg.net). Featured are sections on their whole range of products as well as a complete dealer list.

... If you are attending **LDI** in Phoenix this year, visit their website at [www.etcenv.net/ldihome.htm](http://www.etcenv.net/ldihome.htm). You will find information on exhibitors, workshops and special events and you can register online.

... If you have access to a browser, but not to e-mail, one answer is **Hotmail** at [www.hotmail.com](http://www.hotmail.com). For instance, I am writing this column at Kinko's in Nashville and their machines do not have Internet e-mail capabilities and I need to get the file to our office. Enter Hotmail. For free, you



can set up an e-mail account where you can send and retrieve mail from your browser and keep a personal address book. You can even set up 4 POP mail accounts so that you can read your e-mail at home or the office. It receives your POP mail instantly and in a format that is superior to most e-mail programs. Try it out.

... **Canada One** is an extensive business resource site aimed at Canadian business. Aside from the wealth of information on business management and promotion, you can also list your own website. Visit at [www.canadaone.com](http://www.canadaone.com)

... The **Music Industries Association of Canada (MIAC)** has changed their address to [www.miac.net](http://www.miac.net). The site has been completely redesigned and expanded and included information on members, association activities and the MIAC Show held every August.

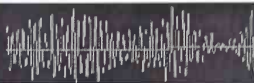
... If you are attending the **AES Conference** in San Francisco, visit the Audio Engineering Site at [www.aes.org](http://www.aes.org). You will find exhibitor information, events schedule, hotel information and registration details.

... **Norris-Whitney Communications** operates **The Music & Audio Connection**, the international online resource for music enthusiasts, musicians, music and audio professionals. Included are classified ads, products for sale, company showcases, discussion forums, associations, music education, music & audio resources, career information and file libraries. Updates to the site are available by e-mail or on The Pointcast Network. Visit at [www.musicandaudio.com](http://www.musicandaudio.com). For more information, e-mail to [info@nor.com](mailto:info@nor.com), Fax (905) 641-1648 or call (905) 641-3471.





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## Technology News

# Web Marketers Profit From Starr Report

(09/15/98; 12:00 a.m. ET)

By [Malcolm MacLachlan](#), [TechWeb](#)

It may look like a national crisis on TV, but the report on President Clinton by independent counsel Kenneth Starr is a business opportunity online.

The 445-page report, which details a sexual affair between the president and White House intern Monica Lewinsky, went online Friday. Within minutes, people were trying to make money from it.

One opportunistic e-mailer used the occasion to have a "Presidential Impeachment Sale" on its bulk e-mail software. "Should the president be impeached?" it asked. "Tell the world." The ad invited people to use the Bulk E-Mail Combo to start an impeachment campaign -- and promote its business in the process.

Others spammed the Internet with addresses for mirror sites of the report. Another entrepreneur offered the Starr report on CD-ROM for \$75.

But the biggest news was the sheer number of people seeking the report -- and how major news organizations capitalized on it.

RelevantKnowledge, a Web traffic researcher, estimated 24.7 million people read the report online by late Saturday.

A survey by software company Alexa Internet found one out of seven people who were online saw the report. People seeking the report accounted for 38 percent of all traffic on federal servers, according to Alexa. During the first two hours the report was released, 8 percent of all Web search and address requests in the world were for the Starr report, according to Alexa.


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**IE 4 USERS  
GET CMPNet  
CHANNEL**

"There were other ways you could watch the Mars landing, but this is how people read the Starr report -- even Congress," said Alexa president Brewster Kahle.

Many people said the volume of requests would shut out most people seeking the report, said Tom Leonard, associate dean of the Graduate School of Journalism at the University of California at Berkeley. However, mirror sites went up quickly, he said.

"It seems to have been distributed amazingly efficiently," Leonard said.

The distribution of the report shows how the Web has changed the rules, Leonard said. An interesting comparison, he said, is the release of the Pentagon Papers in 1971, where copying and distribution was a major barrier in getting the documents to the public.

"The difficulty of distribution was part of the story," Leonard said. "With the Web, that challenge is wiped away."

One major turning point came four years ago, he said, when the University of California at San Francisco obtained the Brown & Williamson Tobacco Papers. Tobacco manufacturers sued to prevent their distribution, but the university put the papers online, and the issue went away.


More Web users tried to get the report from news organizations than from government sites, according to researchers. RelevantKnowledge said it found 1.6 million people downloaded the report from federal government sites Friday and Saturday, while four times that number downloaded it from the sites of national news organizations.

Traffic at national news organizations doubled during this period, according to the RelevantKnowledge [report](#).

News organizations were better able to handle the traffic, according to Keynote Systems, a research company that concentrates on backbone performance. It found government servers rejected nearly half the access attempts during the peak Friday and Saturday period.



The online versions of *The New York Times*, The Wall Street Journal, and *USA Today*, on the other hand, all had failure rates of less than 5 percent.

CNN Interactive had a failure rate of 12 percent, according to the [Keynote report](#), but it also bore the brunt of the traffic, according to most reports. CNN Interactive said it reported a record 34 million page views for Friday. 

#### Related Stories:

[Starr Report On President Clinton Goes Online](#)

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## Search Sites Refine Their Technology and Methods

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### The Pay to Be Found Model Is Spreading

by Hannah Kinnersley

*Originally published in the October 1998 issue*

For the past year, it seemed like search-engine firms have been focusing on everything but searching. Features such as free e-mail, language translation, and stock quotes are all available from would-be Web portals, but rest assured that a lot of effort is going toward making finding information online faster and more intuitive as well.

Although not technically a search engine, Alexa Internet's Alexa 2.0, a "Weblication" that can be integrated into the most recent versions of Netscape Navigator and Internet Explorer, tries to find patterns in Web-site usage that will help surfers find what they seek.

Brewster Kahle, president of Alexa Internet, describes Alexa as a companion guide to searches. "Rather than offering a keyword search, Alexa uses Firefly Technology to leverage more information than the contents of the Web site, telling the user what other people thought of the page."

Other search-engine firms attempt to add some personality to their services. Ask Jeeves ([www.askjeeves.com](http://www.askjeeves.com)), for example, attempts to answer questions posed by users with sometimes hilarious but frequently useful results. When asked for the name of Sherlock Holmes' brother, the ninth response brought up a film title about the detective's brother Mycroft, but the third response listed a page about getting green cards for relatives.

As the number of users online has increased, so has the value of a given search result. Real Names is a service that, for \$100 a year, allows you to use a keyword as an actual address. By registering a brand name or product description, companies can bypass using URLs completely. For example, typing in "new beetle" in Real Names' search box takes you directly to Volkswagen's New Beetle page.

Another service, GoTo.com, also works on the pay-to-be-found principle. Results from GoTo's Inktomi-driven search engine are listed according to which companies paid for placement. A search for "books" shows that the top 34 sites listed will pay GoTo anywhere from a penny to 10 cents for a hit. Over 1,000 advertisers so far have bid to pay for high placement, including Barnes and Noble and Online Auto.

However, as David Card, an analyst at Jupiter Communications points out, "Just because someone paid for a top spot doesn't mean it is the most useful."

As the Internet expands, the problem will not be how to find information, but creating a format for presenting it that will make it useful. According to Card, "It's no accident that Yahoo leads the field. Having humans make decisions on content classification marks the difference between raw data and information."



Return-Path: <quimby@antennapr.com>  
Date: 16 Sep 98 14:57:39 -0700  
From: Quimby Mills <quimby@antennapr.com>  
Subject: Alexa:Demoletter Weekly Edition, September 14, 1998  
To: cynthia lohr <cynthia@alexa.com>  
Reply-To: Quimby Mills <quimby@antennapr.com>

Hello Cynthia,  
Alexa is Chris Shipley's Demoletter! Yay. BTW - 2:00pm Friday 9/18 is OK with Steve Hess. He has directions and will see you there.

Quimby

-----  
Quimby Mills  
Antenna Group Public Relations  
ph: 415.977.1914  
fx: 415.896.1094

Date: 9/14/98 5:25 PM  
From: Chris Shipley  
Demoletter Weekly Edition September 14, 1998 Volume 3, Number 28

Companies in this issue:  
Digital Photography: Kodak, Intel, Hewlett-Packard, Seattle FilmWorks  
CapShare: Hewlett-Packard  
Archiving the Internet: Alexa Internet  
End Notes: US West, BellSouth, Netscape, AOL, Adobe, Microsoft,

#### INTEL AND KODAK HEADING OFF FOR ANOTHER EXCELLENT ADVENTURE IN DIGITAL PHOTOGRAPHY

Intel and Kodak are ready to roll out a massive marketing campaign and some new products aimed at the digital camera market, according to online reports that surfaced late last week. The event is slated for September 23 and will feature Kodak's announcement of a new service from Kodak that allows users to more easily turn conventional pictures into digital images (which will be burned into CD-ROMs by Kodak) and which could be subsequently taken by consumers to Kodak (or third-party) kiosks where they could get enlargements or copies of their pictures. The pictures could also be read on high performance desktops and notebook PCs. Intel is going to use the event to plug its internally developed digital imaging technology and is reportedly willing to help fund a marketing plan for the new service that could be worth up to \$150 million, according to the reports.

Digital imaging and photography are technologies that everyone thinks are symbiotic. And if you're hip deep in technology these technologies look even better. But this market has yet to develop (no pun intended). While the cost of digital cameras and digital photo processing has come down recently, output is still prohibitively expensive. Hewlett-Packard's exquisite photo printer--for which the HP has launched an aggressive rebate program--is still in the high hundreds of dollars. That's tough to justify for a \$15 dollar per month hobby. Film-to-digital photo processing solutions such as the one Kodak is launching (and whose basic pproach is similar to the one that Seattle FilmWorks has tried for years) haven't become popular and still require too many steps. And although the idea of near

instant prints from a CD seems insanely great, does either company have deep enough pockets to get the add-on machinery in place on a nationwide basis in a timely fashion?

I've been accused of being a curmudgeon before. I still believe that digital photography is one of the hot applications that will not only create new classes of computer use, but also can create wealth for startups and their financial backers as well as existing companies like Kodak (and to a lesser degree Intel). But before this can happen the cost and complexity of the consumer's transitions from conventional to digital photography have to drop significantly. The one thing that is whittling away at these obstacles, however, is the Internet and the massive number of personal home pages where folks are posting baby pictures and reunion shots for friends and family to share. Personal home pages are fueling the move from film to digital photo processing.

#### HEWLETT-PACKARD DELIVERS ON INFORMATION APPLIANCE PROMISES

This morning, HP's Greeley, Colorado, division took the wraps off a long-held secret--its CapShare 910 data capture and communication appliance for mobile professionals. CapShare is a portable scanning system that operates on two rechargeable batteries (or for less time on standard AA batteries in a pinch). Unlike previous hand scanners, you can capture images with the device by swiping it over a page using single or multiple passes. The device stitches the image and compresses it in order to store up to 50 pages. Scanned images can be transferred later to another computer or other device using the built-in IR.

I've been testing the device, which weighs in at 12.5 ounces and fits comfortably in hand, for several days and, universally, the CapShare captures the imagination of the people I've shown it to. I find it to be a fantastic way to grab all those pages I'm typically tearing from newspapers and magazines. I can transfer images to my laptop from which I can email or fax them to others. At \$699, I find it a little pricey, but that figure has met no objection from the very mobile professionals for whom I've demonstrated CapShare.

CapShare demonstrates both HP's technical prowess, its market-research driven approach to product design, and its willingness to move into new territories. Over the last eight years, HP has increasingly been willing to turn creative employees loose on alternative technologies. While it's difficult to predict lines of other products, I suspect that we'll see several new information appliance devices (including perhaps one based on Java) from HP in the next 12 months. And rather than a "one device fits all mentality" you can now count on HP to look at specific markets.

WHAT WOULD YOU PUT ON 2,083,332 FLOPPIES? How big is the current Web? About 3 terabytes (the equivalent of 2,083,332 floppies), and growing by 1.5 million pages a day. Alexa Internet has been in the business of archiving the Internet in recent years and has become a remarkable resource for Web statistics. Some of Alexa's recent findings:

- \* A current snapshot of the Web is 3 terabytes, or 3 million megabytes.
- \* The Web doubles in size every 8 months.
- \* Ninety percent of all Web traffic is spread over 100,000 different host machines.
- \* Fifty percent of all traffic goes to the top 900 Web sites currently available.

More Web statistics are available on Alexa's site at [www.alexa.com](http://www.alexa.com).

END NOTES Is Internet telephony about to go under a federal microscope? Last week US WEST said it was allying itself with BELLSOUTH to try to make ISPs pay the same rates as phone companies. The argument here is that if ISPs are going to offer voice service, then they're going to have to pony up the same tariffs and access fees as phone companies. My bet? Even though Internet telephony is a tiny subsegment of an ISP's traffic, ISPs are very likely to find themselves in a whole new regulatory and fee-based ball game in the near future. And that's bad news for the small number of startups and their financial partners with products in this area. The telcos could, however, be making a political play. At the recent Aspen Summit, executives at several telecommunications companies argued that the regulations under which they must function put them at an unfair disadvantage with other Internet bandwidth providers . . . ADOBE today introduced one of the nicest products I've seen for Web page design by mere mortal business people. Adobe ImageStyler helps you create live objects, Java rollover effects, and other design elements quickly and without a degree in graphic arts. The package sells for \$129 and is available on the Adobe Web site at [www.adobe.com](http://www.adobe.com) . . . How many copies of independent counsel Kenneth Starr's report were downloaded and printed Friday and Saturday? The best guesstimate is more than 10 million. And Netscape's NetCenter, AOL, and a few dozen other sites mirrored the full report in what might be the first real test of the Web in this country. And what were people doing with the document? One local office supply outlet here on the San Francisco Peninsula cleared out its HP ink jet inventory on Friday night and put a serious dent in its laser cartridge inventory through Saturday . . . MICROSOFT and US DOJ attorneys want more time and according to published reports that surfaced late last week have requested a delay in the start date of the Microsoft trial. Both sides have asked for a push back to October 15 but Judge Thomas Penfield Jackson has yet to issue a continuance . . .

DEMOletter, Weekly Edition is edited by Chris Shipley ([chris\\_shipley@demo.com](mailto:chris_shipley@demo.com)) and is published on the second through fourth Monday of each month as a benefit of subscription to DEMOletter. Annual subscriptions are \$495 US. Address subscription queries to [meg\\_burns@idgconferences.com](mailto:meg_burns@idgconferences.com). DEMOletter is a product of the IDG Conference management Company, a subsidiary of IDG WorldExpo. Copyright 1998. All rights reserved





## Electronic Version of



## Daily Macintosh News, Analysis, Information, and Resources!

## MONDAY'S NEWS

Last Updated:

7:02:10 AM Wed, Sep 16, 1998

## Headlines For Wednesday, September 16th

## Finding People On The Net (With Your Mac)

By Nancy Gravley: *My First Mac Was A Typewriter*

A wonderful benefit of the net is the ability to find specific people, whether they be old friends, old school mates, lost family members, or old loves. It does work, and I know people who have found friends they knew 30 or more years ago, including one person who has rekindled an old love. I know someone else who began searching for a friend from college....

Read

[My First Mac Was A Typewriter](#)

## Entrega Introduces iMac Matching USB Hubs

[6:15AM] Entrega announced 2 USB Hubs today that will match the iMac's color scheme. The new hubs come in either a 4 port or 7 port variety and allow any Mac or PC equipped with USB to connect USB devices to their Mac (or PC). According to the company's press release:

"Mac owners have a discerning eye, and we wanted to make a hub specifically for them," said David Murray, vice president of product marketing at Entrega. "We designed our new hubs to match the iMac colors -- they look great together!"

[Reviews](#)[Webintosh Perspectives](#)[First Looks](#)[Contact Information](#)[Features](#)[Advertising Information](#)[Awards](#)[Webintosh Archives](#)around the web for  
Wed, Sep 16, 1998Return To Sender - [The Clearer Picture](#)New iMac Sales Still Hot- [News.com](#)Apple Debuts WebObjects 4 with Support for Power Macintosh G3 Systems - [PR Newswire](#)Jobs Debuts PowerBooks with Scalable 14-inch screens - [Macworld](#)

## the webintosh spotlight

[Finding People On The Net \(With Your Mac\)](#)

By Nancy Gravley:

*My First Mac Was A Typewriter*

A wonderful benefit of the net is the ability to find specific people, whether they be old friends, old school mates, lost family members, or old loves.....  
September 9th

[My First Mac Was A Typewriter](#)

by Nancy Gravley:

*My First Mac Was A Typewriter*

Ok. Lets get the confessions out of the way first shall we? I learned to type on a manual typewriter. I thought the IBM Selectric with the option of changing fonts was the greatest invention imaginable. I remember when there was...  
September 9th

[Quark, Adobe, M&A ... and Decadence?](#)  
by Bill Troop

I've always believed M&A (mergers and acquisitions) was the most

The company also announced a series of USB cables that are not, unfortunately, colored. The hubs will retail for \$79.95 and \$129.95, depending on the number of ports. Pricing for the cables was not announced.

[News.com](#) - [SCI Systems](#)

## NEC and Altec Lansing Announce Mac USB Products

[5:40AM] NEC and Altec Lansing have announced a new product line jointly developed called IntelliBase. IntelliBase is a monitor base designed that includes either 4 USB ports, a speaker system, or both. The speaker system is a digital USB sound solution that processes sound at the speaker level. This negates the need for a sound card or onboard sound as in the Mac, but it is not clear if it will work with the Mac.

[NEC](#) - [Altec Lansing](#)

## Headlines For Tuesday, September 15th

### MacMall Introduces New Software Site

[12:48PM] MacMall has announced a new site for Mac software called the Macintosh Software Buyers Guide. This new site is designed to bring in Mac buyers by bringing together one thousand Macintosh software titles in one virtual location. Since finding software is often difficult for Mac users, especially in retail outlets, MacMall may find willing buyers lining up on the internet.

**The Webintosh Spin:** We found the interface of the site to be klunky as well as slow, but this is likely due to the fact the site is driven by Active Server Pages. We also found that many outdated versions of software were being offered, some over a year out of date. Other inconsistencies include GoLive Cyberstudio being offered on the home page but not the web design section. If MacMall can correct some of these opening day bugs, the site could be an excellent resource for Mac software buyers.

[Macintosh Software Buyers Guide](#)

### Demand for iMac May Lead To Outsourcing

[12:22PM] News.com reports that Apple may increase the manufacturing capacity for the iMac line by outsourcing to SCI Systems. SCI Systems has handled Apple manufacturing in the past and with sales of our favorite Bondi-Blue Mac

and acquisition were the most potent indication of corporate decadence...  
August 27th

### The iMac Rollout

We were able to spend a few hours at CompUSA's iMac rollout in Austin, Tx. on Saturday morning. From the moment we entered...  
August 15th

## cool tool of the week



This cross-platform toolbar is designed to work with a web browser. It gives you access to instant statistical information based on other Alexa users (which the company sells) while guaranteeing user-anonymity. Domain information, general traffic info, and even an online-poll (*hint: Vote for Webintosh!*) are all instantly attainable

### THE MAC TICKER (As of 9/16/98 10:14 AM)

<b>Adobe Systems:</b>	<b>Apple Computer:</b>
31 $\frac{1}{8}$ (up $\frac{9}{16}$ )	37 $\frac{1}{2}$ (down: $\frac{11}{16}$ )
<b>Intuit:</b>	<b>Imega:</b>
40 $\frac{3}{8}$ (down: $\frac{5}{16}$ )	4 $\frac{11}{16}$ (up: $\frac{1}{16}$ )
<b>Macromedia:</b>	<b>MetaCreations:</b>
13 $\frac{9}{16}$ (up: $\frac{3}{16}$ )	3 $\frac{1}{8}$ (unchanged)
<b>Metrowerks:</b>	<b>Microsoft:</b>
3 $\frac{3}{8}$ (unchanged)	107 $\frac{15}{16}$ (down: $\frac{3}{8}$ )
<b>Netscape:</b>	<b>Qualcomm:</b>
21 $\frac{11}{16}$ (up: $\frac{3}{8}$ )	45 $\frac{5}{8}$ (up: $\frac{15}{16}$ )
<b>The Dow Jones Industrial Average:</b>	
8029.28	
+4.89 (+0.06 %)	

exceeding all predictions, Apple may turn to SCI again to help meet demand. SCI's market niche is manufacturing other companies' products and they currently make systems for Compaq as well as Hewlett-Packard.

[News.com](#) - [SCI Systems](#)

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### **Quark Ends Charade**

[10:40AM] Quark has officially ended its pretense at acquiring Adobe. Citing Adobe's unwillingness to even talk about the plan, Quark has ceased its efforts.

**The Webintosh Spin:** The company sounds almost surprised that Adobe was not interested. That reaction is the real surprise.

[Quark](#) - [Adobe](#)

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## **Headlines For Monday, September 14th**

### **IBM Announces Breakthrough Display Technology**

[4:20PM] In the second time in as many weeks, IBM has announced a breakthrough technology, this time in the world of flat panel displays. The new technology boasts an incredible 200 pixels per inch (ppi) resolution which the computer giant says makes it virtually indistinguishable from the printed page.

**The Webintosh Spin:** Wow. Once this technology makes its way into products, all bets are off.

[Read The Full Webintosh Story](#)

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### **Epson Announces New Mac Scanner**

[10:55AM] Epson has announced a new scanner for the Mac, the Perfection 636. The new scanner sports a SCSI connection and the company claims it is the fastest scanner in its class. Seeking to reach people after the Holy Grail of scanning, the company has included a technology called Text Enhancement Technology (TET) which will reportedly increase OCR reliability. The scanner is scheduled for release in October of this year.

[Epson](#)

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### **Network Associates End Confusion Over Virex**



[9:50AM] Network Associates, the owners of Virex since they acquired Dr. Solomons in June of 1998, has announced its ongoing plans for development of the what many consider to be the top anti-virus software for the Mac.

**The Webintosh Spin:** Network Associates has been under some criticism during the days since the acquisition of Dr. Solomon's and this announcement is encouraging, but it leaves some questions unanswered.

[Read The Full Webintosh Story](#)

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### **Symantec Releases Norton Utilities 4.0**

[9:30AM] Symantec has finally released a version of its award winning maintenance utility for the Mac, Norton Utilities for Macintosh, that is compatible with Apple's HFS+ file system. The new Norton Utilities for Macintosh is PowerPC native (for the first time), and sports a nice new interface. It also brings along some new capabilities which, combined with the speed increases inherent from the PowerPC native code and the support for HFS+, make for a much needed upgrade. Pricing is listed at \$99.95 and \$49.95 for upgrades.

[Symantec](#)

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See September [archive](#) for recent news...

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# A Look at a New Season of Net Innovations

Fall is the season of innovations. There are so many new products and initiatives, it's a challenge to just ride the waves of announcements. Here's my take on some of the more interesting developments.

**Advertising by request.** Blockbuster Entertainment has started sending e-mail newsletters to tell customers about new video and game rentals. The chain is using a service from MinderSoft Inc., of Herndon, Va., which has been marketing the concept of using e-mail lists combining topical news with targeted promotions. When an individual registers for a list, he or she indicates personal preferences; for Blockbuster, that means choosing among categories such as action films or Nintendo64 games.

I would expect these e-mail lists to be a success; however, there's another component that's questionable but worth watching: When consumers register, MinderSoft offers the option of receiving updates via e-

mail or via proprietary software downloaded to the user's hard disk.

If the user chooses the download, MinderSoft will monitor the consumer's Net connection. While he's online, MinderSoft may send a trailer for Bruce Willis' next disaster extravaganza. The software downloads in the background, so there's the potential to startle a user with a crash-and-burn commercial while he's toiling away on a spreadsheet.

To help push the proprietary software onto hard disks, Blockbuster will offer CD-ROMs at its stores. While a MinderSoft spokesperson said the current plan is to transmit only trailers and other marketing bulletins, this looks like a trial balloon for a paid content-delivery service. It could lead to a new channel for selling short films such as videos and TV sitcoms.

MinderSoft will soon launch a similar e-mail reminder service for Toys R Us—called GrowthMinder—that shows that not every market can benefit from the technology. The toy store will keep a record of a child's

growth and send helpful reminders on the proper toys to buy. It's not clear to me that children need any help in reminding parents about their need for new toys.

**Why you can't find anything on a search engine.** We used to be impressed that there were a few million pages on the Web. According to Alexa Internet, 1.5 million pages are created every day, with the Web doubling in size every eight months.



Gus Venditto

That doesn't mean everybody with a Web page is becoming a star. Alexa estimates that half of all traffic goes to the top 900 Web sites.

**Some things do get better with age.** It wasn't long ago home users complained of having difficulty getting online. If you don't hear that complaint as much, it's probably because most ISPs have gotten better at providing a connection when users place a call. Inverse Network Technology found that call-failure rates are at an all-time

low: On average, only 4 percent of all dial-up attempts fail. A year ago, the rate was double that, with 8 percent of all dial-up attempts failing during business hours.

**Don't tread on my network.** BellSouth has taken a first step in what may turn out to be the big Net legal battle of 1998. The regional carrier sent a letter to Net telephony providers asking for a penny per call on every voice call passing through its nine-state network. Bell companies have long complained that Net telephony gets a free ride, since it can route calls over any distance for the price of a local call.

AT&T spokeswoman Janet Stone said, "It is unclear under what authority BellSouth is taking this action." Net telephony provider ICG was more blunt. The company's senior vice president of government and external affairs, Cindy Schothout, told Wired News: "BellSouth is wrong legally."

And so the Internet launches yet another fertile field for lawyers.

search: **COMMERCE, REGULATION**

Gus Venditto is editor-in-chief of Internet.com, Mecklermedia's Web service.







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## Internet Goes Crazy, Slows Slightly For Starr Report

As dawn broke across the American capital last Friday, everyone knew it was going to be a big day, but the Internet release of the Independent Counsel's report on President Clinton meant it was going to be an equally big day in offices across the nation.

For the first time, Internet technology was allowing everyone, from regional and small-town newspapers to search engines and Internet service providers, to compete directly with the likes of CNN and give users their first look at the report.

Preparations for the release began on Thursday, when it became clear the report was likely to be posted online Friday. Primary distribution point for the report would be the Library of Congress homepage ([www.loc.gov](http://www.loc.gov)), and DRANet, the service provider that connects the site, was busy provisioning additional bandwidth, adding extra Web servers and

working on traffic management plans.

As the day continued, anticipation of the demand for the report increased. Two additional federal Web sites, the House of Representatives ([www.house.gov](http://www.house.gov)) and the Government Printing Office ([www.gpo.gov](http://www.gpo.gov)), were also preparing to host the report, and several private organizations were also making plans. CNN, for example, was telling its viewers to check its own Web site ([cnn.com](http://cnn.com)) for the report.

On Friday, with some preparations still underway, everyone awaited the vote that would release the report onto the Internet. No one was really sure what to expect. Would the report have to be typed into electronic form? Would it be scanned into multiple graphics files? In the end, it was much easier. Kenneth Starr had thoughtfully supplied the entire report on CD-ROM and all that had to be done was a conversion to HTML.

Once completed, the 450-page report hit the Internet.

All of the major media outlets scrambled to download the report and get a mirror up and running so Web surfers would not have to leave their sites to view the report somewhere else. Among them were CNN, the *Washington Post*, the *Los Angeles Times*, *Chicago Tribune*, ABC News, the *New York Times* and MSNBC.

Determined not to lose out on the massive interest, local and portal sites, including Yahoo, Excite, Netscape's Netcenter, Northern Light, HotBot, Cox Interactive and Lycos, also launched mirrored versions of the report. Most of the non-news sites dressed up their mirroring as a public service. Netscape, for example, said it was, "assisting the government in distributing the Starr report from Netcenter."

How did the Internet fare in the wake of this?

An early report from Keynote Systems said the release produced minimal impact on Internet performance. The company continually measured response time of popular Web sites and networks to come up with its measurements.

Overall, performance on 40 major business Web sites between 1 p.m. and 2

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Creative Labs Ensoniq PCI 32 Voice.....\$48	HP 7200i 8x2 CD RW.....\$389	Samsung 2.1GB UDMA.....\$118	ViewSonic G771 17" 27dp.....\$399
Turtle Beach Montego A3D PCI 64.....\$98	Toshiba 32x EIDE.....\$75	Seagate Medias Pro 8.6GB.....\$269	
	Pioneer 32x SCSI.....\$99		

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p.m. was 6.55 seconds against 8.07 seconds on Thursday. Part of this degradation, the company noted, could have been attributed to a major fiber cut early Friday between Fairfax, Va., and Atlanta, Ga.

The picture was not so bright on Starr-related sites, but was not disastrous. Keynote said that during the same one-hour period, access-failure rates of Starr-related Web sites were unusually high. Thirty-two percent of attempts to access the CNN Web site and 53 percent of attempts to access the MSNBC Web site failed.

At the House of Representatives Web site, access failures hit a massive 89 percent.

Confirmation of the small effect on traffic was confirmed by WorldCom, which operates the major MAE-East Internet exchange point. It said it observed a small blip in traffic, of around 100 megabits per second, at 2 p.m., but otherwise saw only slightly higher traffic than normal.

Alexa Internet provided more statistics, based on its 200,000 user-base. It said 15 percent of users viewed Starr's findings. It also estimated 38 percent of all government-related Web traffic was related to the Starr-report.

Despite the full text being available

from countless sources on the Internet, several publishers have already announced plans to rush print copies of the report to bookstores next week.

— Martin Williams, *Newsbytes*

## Semiconductor Sales Down 17 Percent

A "warmer" PC sales climate reported last week by International Data Corp. (IDC) has not translated yet to better chip sales. According to Semiconductor Industry Association's (SIA) "Global Sales Report," world chip sales dropped 1.9 percent from June to July and were down 17 percent collectively from July 1997.

The industry trade group, which tracks semiconductor markets on a month-to-month basis, put the value of July's semiconductor market at \$9.667 billion, compared to \$11.649 billion a year earlier.

The group said continued economic turmoil in Japan and pressures in product pricing were largely responsible for the depressed market.

However, the group also held out hope for struggling chipmakers as the market shows signs of coming into balance, the group said.

"A positive sign in the marketplace is that personal computer sales continue to

grow," said George Sealise, president of the SIA.

Also, the worldwide figures were skewed by short-term events in Japan, the group said. The July sales figures reflect a 30.2 percent drop in Japan's market compared to a year ago, from \$2.94 billion in July 1997 to \$2.05 billion in July of this year. But two-thirds of that decline tracks directly to the depreciation of Japanese currency.

Still, the 17 percent global decline was real and was reflected to varying degrees in every major market area. The Americas market fell from \$3.85 billion to \$3.20 billion, Europe dropped from \$2.31 billion to \$2.22 billion and Asia-Pacific slipped from \$2.54 to \$2.1 billion.

The Global Sales Report is assembled by the World Semiconductor Trade Statistics (WSTS), an organization that represents 70 companies. A complete list of SIA publications is available on the SIA Web site at [www.semichips.org](http://www.semichips.org).

— Craig Meier, *Newsbytes*

## MasterCard Demos Multi-Application Smart Card

MasterCard has been highlighting the

*continued on page 8*

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## Preview: Alexa

September 28, 1998

by [John Engler](#)

[Alexa](#)

[FAQ](#)

Pros: go where you want with greater ease

Cons: a little slow at times

### Where do you want to go today?

Excuse me for the stolen advertisement, but if Microsoft really wanted to live up to this question they'd have bought Alexa by now and it would be part of their "active desktop".

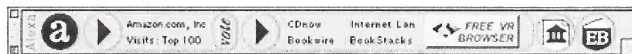
Alexa is a relatively new piece of freeware for the Macintosh. In fact it hasn't been officially announced yet (as of this writing). I just happened to see an advertisement for the PC version and thought I'd check it out.

### So what is it?

In the ever growing vastness of the internet there are search engines; uneducated, idiotic spiders that search the internet trying to help you find your way. When is the last time a search engine really helped someone find exactly what they were looking for without consuming too much of their time?

This is where Alexa comes in, as nifty little toolbar that helps you browse the internet better. This utility works by checking the information contained in the web page you are viewing and its server's database about that web site, and provides you information about that site and possible links to other sites like the one your looking at.

"When you walk on a path through the woods, you are benefiting from the explorations of the people before you--finding the best way up the mountain or down to the lake. Alexa tries to do the same thing for the Web."



WHERE YOU ARE  
In-depth information

WHERE TO GO NEXT  
A continuous source  
of related sites

ARCHIVE OF THE WEB  
Now you can reach  
unavailable and  
"404-Not-Found" pages



## Where are you?

When the program is providing information about the site you are looking at it can provide the a lot of objective and detailed data. It will tell you who the site is registered to, how popular that site is, how many other sites link to that site and some third party affiliations with publishers and privacy advocates such as Yahoo! Internet Life, RSACi, TRUSTe and VeriSign.



## Where to go next?

In the related links part of the toolbar you can find a small list of links that are based on the usage patterns provided by all Alexa users.



## 404 Errors, No more! (maybe)

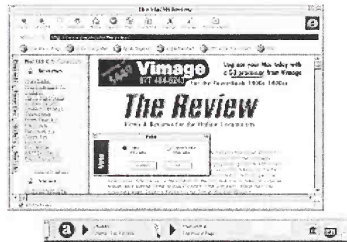
Alexa is also working constantly to archive the entire internet to try and alleviate the constant problem of 404 Errors - when pages no longer exist where they once did. Alexa can serve the most recently archived version of a 404 Error if they've archived it. If they didn't catch it before it disappeared then it might just be a bad link, or it wasn't up long

In today's world it's hard for Mac users to find really good freeware. Alexa has been running on my iMac for the past weeks and has yet to crash on me, despite being in its developmental infancy. The reason Alexa can afford to be freeware is that it uses advertisers to defray its costs. When you use Alexa you'll see ads on its toolbar and in the pop-up windows that give you information. This is a fundamental shift in the way advertising on the web occurs.

"Presently, advertisers can choose only from approximately 900 sites that sell ad space (Source: Cyber Atlas/Jupiter's Ad Locator). Alexa, however, offers access to users of the entire Web, estimated by Business Week to be 40 million people. Moreover, Alexa provides context-sensitive advertising allowing advertisers to launch advertising campaigns that target clusters of Web sites, specific geographic regions, and/or time of day. This method delivers advertisements relevant to a user's interests and to the site being viewed." At least the ads should become relevant to Mac users as this service expands.

### Help others find their way around!

Perhaps one of the coolest features is the ability to vote on whether or not you like a particular site. When visiting a site that you can vote for it, this paves the way for following users to get led in the direction of that site (if enough people vote for it) or be turned away from it (if the opposite happens).



### Should you download it?

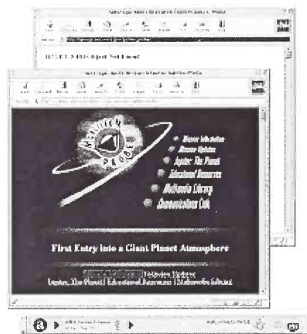
Alexa is still in the alpha version for Macintosh so usually I would suggest waiting for the final release. But I know that Mac users by habit are always downloading the latest version of anything, regardless of what has been added or fixed. But you should know that Alexa has a strategic partnership with Netscape, so they've built the features into Netscape Communicator 4.5 and 4.06. It's what runs the What's Related button on your toolbar, you provide please?

If you're using Netscape 4.05 or even back to 3.x, or Internet Explorer 3.x or later then Alexa should work for you too. I'm using it with MSIE 4.01 (310) on an iMac with System 8.1 and it works great. Alexa even comes in a 68K version so who knows what the limits are.



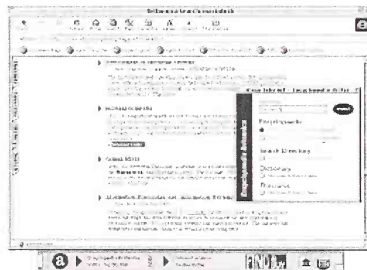
enough.

"As of July, 1998, Alexa's Web archive is in excess of 12 terabytes and we take a new snapshot approximately every 60 days (a terabyte is a million megabytes). Alexa began collecting the Web in early 1996 and we now have at least 5 snapshots of over 1,000,000 Web sites. We are beginning to adjust our visits of sites to reflect which sites change most frequently. We make it easy for Web site administrators to request that their site be archived at a particular time or not archived at all, whatever their preference. "



## Desktop Reference System

Alexa also provides a really neat way of getting at reference material. They've teamed up with Encyclopaedia Britannica, the Merriam-Webster Online Dictionary and Thesaurus, Britannica Online and eBLAST by Encyclopaedia Britannica, the new searchable directory of over 125,000 sites reviewed for their usefulness. If you are a student of anything this means you don't have to buy another heavy encyclopedia volume and you might save yourself a trek to the voluminous library.



## Alexa is Freeware?

## Summary

Alexa is going to be a hot piece of software. If you don't download it now, keep your eye on it. It promises to revolutionise the web. The sooner more people start using it, the more accepted it'll be. The more Mac users that use it, the more Mac links it'll provide. Think Different, anyone?<sup>TM</sup>

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1502





# Live forever on the Web

By Ashley Dunn  
Los Angeles Times

In the cosmic scheme of things, the human concept of forever is just a blink. Love is not forever. Beauty is not forever. Not even Microsoft is forever.

But in the past few decades, the human concept of forever has undergone a revolutionary transformation with the rise of digital information. Digital data truly are forever. The information can be forgotten, destroyed or misplaced — and usually is. But with the proper will, it can also be eternal — an unchanging stream of ones and zeros that can stare at the breadth of human existence and not blink.

The movement to archive digital information is well under way with such undertakings as Project Gutenberg ([www.gutenberg.net](http://www.gutenberg.net)), which has converted nearly 1,000 books and historical documents into digital form. These so-called e-texts in the collection range from "A Child's Garden of Verses" to "Zincali, Gypsies of Spain."

Brewster Kahle, inventor of the wide-area information servers, or WAIS, system, has been working on a project called the Internet Archive ([www.archive.net](http://www.archive.net)), which has been storing every bit of the Web it can find for historians. He has already assembled about 4 ter-

abytes of information — that's 4 trillion bytes — including a collection of Web sites on the 1996 elections ([www.archive.org/smithsonian.html](http://www.archive.org/smithsonian.html)).

There are archives on the Internet for just about everything from digitized photographs to historical software to MIDI music files.

The power of perfect digital reproduction has begun to shift the very concept of what is history, pressing it beyond the veneer of great documents, ruins and archaeological finds into the realm of common life.

David Blatner, an author who is specializing in books on computer graphics, launched a project last year that is called AfterLife ([www.afterlife.org](http://www.afterlife.org)) to archive the home pages of deceased Web surfers. The project got started after a friend named Irv Thomas ([webster.u.washington.edu/~irvthom/Realhome.html](mailto:webster.u.washington.edu/~irvthom/Realhome.html)) expressed concerns about the fate of his Web site after he died.

Thomas, a 71-year-old Seattle resident, had been a programmer for 30 years but abandoned that work to write and philosophize about life. He published a book about his European travels on his site and archived an intermittent journal of personal musings, called "Ripening Seasons." Like many

Turn to **LIVE FOREVER**, Page 2

Greenwich Times  
9/26

Stanford Advocate  
9/28

From LA Times)



## Live forever

Continued from Page B7

others on the Web, he had come to see his site not as just a collection of random links and pet pictures but an expression of his life and experiences. It was as much an art work as Leonardo da Vinci's Mona Lisa or Henry David Thoreau's "Walden."

What Thomas had confronted was the other edge of the digital sword: While digital information can be preserved forever, it also can be frighteningly easy to destroy. A single misguided keystroke or a missed Internet service payment, and a few megabytes could be lost forever.

Blatner saw AfterLife as a relatively inexpensive way of extending archival care to the creations of the common man.

After more than a year of sporadic volunteer work, AfterLife is still more a concept than a reality. Archiving forever is much easier said than done, requiring a steady flow of funds, which Blatner does not have, and a commitment that will far exceed his life span.

Blatner added that he is also unsure of what should be archived and what should be left to fade into the virtual ether. Should pornography be archived? Should hyperlinks be maintained? Should there be size restrictions? Should obituary-style memorials be allowed? Will HTML have any meaning in the future?

Whatever the answers, the basic idea of using the virtual world to capture pieces of our real-world lives has an undeniable appeal.

There are at least 25 sites now on the Internet that allow users to post virtual memorials on the Web. Most of the sites are connected to funeral homes or cemeteries.

It seems unlikely that many of

these virtual memorials will get within even a few eons of forever. But Sharon Much, a Georgia Web designer who started the first virtual memorial ([www.virtual-memorials.com/](http://www.virtual-memorials.com/)) in 1996 as a way to commemorate her grandparents, said the meaning of these sites is really not about eternity, but about the living and the here and now.

"The virtual memorials offer a way to celebrate the dash between two numbers on a tombstone," said Much, whose free site now lists more than 1,000 people. "That's all there was room for before. I can see these memorials becoming a standard part of life in the future. It can change a morbid part of life into a celebration instead."

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Week of September 28, 1998

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## Insurance Firm Eyes Toolbar Ads

BY Susan Kuchinskas

Illustrating again that every chunk of Web real estate is potential ad space, InsWeb, San Mateo, Calif., has signed with San Francisco-based Alexa Internet to advertise on the "What's Related" feature of the Netscape 4.5 browser and on the user's toolbar. For the campaign, which began over the weekend, Alexa will serve InsWeb ads within its toolbar when users visit an automobile or auto insurance-oriented site. As part of the deal, InsWeb is guaranteed a link as one of the top two choices listed in the toolbar when users click on Netscape's What's Related button.

Alexa is a free, downloadable tool providing ancillary information about Web sites via proprietary software. Alexa also serves ads within a box on its tool bar. Site information provided in the toolbar includes to whom the site is registered, how many visits it's received and a What's Related feature specifying the top 10 sites users visit afterwards. At the top of that list are two paid placements from advertisers that are separated from the remaining eight listings by a tasteful gray line. Both the tool bar ads and What's Related links can be targeted to Web users.

In an agreement signed last June with Netscape, Mountain View, Calif., Alexa Internet--a company founded by technology pioneer Brewster Kahle--provides the software for a similar "What's Related" feature, which is integrated directly into the 4.5 browser.

Terms of the InsWeb deal were not disclosed. An

Alexa Internet spokesperson said that at peak times Alexa was serving as many as 34 ad impressions per second. The campaign will run at least through year's end. Other What's Related advertisers include CBS MarketWatch, HouseNet and First Auction.

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## WIRED MAGAZINE



Issue 6.10

## New Netscape Ships

## Wired News Report

1:40 p.m. 19.Oct.98.PDT

In a move designed to bolster its sagging Internet browser market share and drive visitors to its Netcenter Web index site, Netscape Monday released Communicator 4.5, the latest version of its browser software.

"We have integrated Communicator 4.5 with Netcenter to help Internet users find information more easily," said Dave Bottoms, Netscape product manager.

As anticipated, the program incorporates the company's much-vaunted [Smart Browsing](#) option, which opens Web sites based on simple keywords that users enter in the URL field.

"For example, a user can type in the words 'Mark McGwire' into the navigation bar and [be] automatically routed to baseball sites," said Bottoms.

Aside from Smart Browsing, the new Communicator includes Roaming Access, a feature that allows users to store their bookmarks, address books, and other preferences on Netcenter for access from any browser -- though Navigator works best -- on any PC.

Another new related option, Internet Keywords, uses a database housed at Netscape to point users directly to content related to the keywords. For example, a user typing 'Kenneth Starr' would be led straight to the Starr Report.

The new Communicator also provides a pull-down menu of related sites -- dubbed "What's Related" -- which are culled from the 12 million sites tracked by the [Alexa Internet](#) service. Another

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## New Netscape Ships

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feature called "Net Watch" will allow parents to mark certain sites off limits to their children.

Netscape will also bundle [RealNetworks'](#) RealPlayer 5.0 Net audio and video as well as Headspace's Beatnik high fidelity audio technology, developed by Thomas Dolby.

Sources close to the company said that in recent months, Netscape has moved many of its former Communicator product managers to work on the company's Netcenter site.

In a recent survey by International Data Corporation, Netscape has [lost the upper hand](#) in the browser battle to Microsoft's Internet Explorer. In the first half of 1998, the study showed that US market share for Netscape's browser slipped nine points to 41.5 percent from its 1997 year-end share of 50.5 percent.

**Related Wired Links:****Netscape Gets Real**

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Updated

**Netscape Communicator 4.5** [back to intro](#)

The best thing about Navigator 4.5 is its new array of search tools, which help you move more intelligently through the morass of Web content.

More from the CNET network

CNET News.com:

- [Netscape announces TuneUp for IE](#)

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- [Battle of the sumo browsers: Communicator 4.x vs. IE 4.x](#)
- [The top email clients compared](#)

More from the Web

- [Communicator 4.5 release notes from Netscape](#)
- [Alexa navigation tool info from Alexa Internet](#)

## Browsing



### Performance

For Communicator 4.5, Netscape focused its efforts on stability and ease of use. The new Communicator is at least as stable as its predecessor, and its "Smart Browsing" features, explained below, make navigation simpler. On such a short production schedule, though, something had to give, and Netscape chose performance.

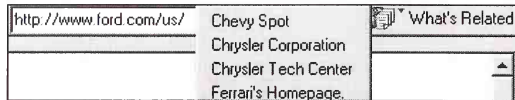
Not that 4.5 is a laggard, by any means. In our HTML- and GIF-loading tests, Communicator 4.5 outperformed 4.07 by a few percentage points--it's not a huge improvement, but at least you'll know 4.5 isn't a step backward. JavaScript performs more smoothly, and Java applets will load and initialize faster, too (though once they load, 4.5 will run them about as fast as its 4.0x ancestors). These additions are nice touches, but they're probably not reason enough to convert from a fast non-Netscape browser. Most of Netscape's performance enhancements are aimed at the Communicator 5.0 project, and the company says we should see significant improvements when it finally ships.

### "Smart Browsing"

One thing no one can debate is 4.5's truly innovative browsing experience--what Netscape calls Smart Browsing. Communicator's new interface helps you navigate the morass of Web content with a minimum of fuss. The new Internet Keywords feature, for instance, lets you type a product name, trademark, or other keyword into the location field; the browser then searches its keyword database for an appropriate site. For example, if you type Ford Mustang into the Location field, 4.5 takes you to the Ford Motor Company Web site. If a keyword can't be found in Netscape's database, the request passes to Netcenter's Excite search. Overall, we like the feature, but it has a few wrinkles. Since Internet Keywords bounces requests for words such as *scripting* to a Web search rather than the more standard [www.scripting.com](http://www.scripting.com), many small Internet sites that have invested in certain domain names justifiably complain that Netscape is hurting their traffic. Netscape thoughtfully provides an option to disable the feature if it's not your speed.

The other half of Smart Browsing is somewhat less controversial. To view sites similar to the one you're viewing, just click the new What's Related

button, and you get a drop-down menu of related links ranging from related-product reviews to competing Web sites. The links are pulled from a customized Alexa database, so the results are similar to those you'd find with Alexa's IE plug-in. In an interesting move, Netscape recently announced TuneUp for IE, an add-on that brings the entire Smart Browsing system to Internet Explorer users.



A click of the What's Related button on the Ford Web site produces a list of competitors—great for smart shoppers and researchers.

## Content filtering

Parents and managers can block access to objectionable Web content with Nav 4.5's NetWatch, which supports PICS-based content filtering. (IE has offered content filtering since version 3.0, so it's long overdue from Netscape.)

[Slicker setup and interface. Cool!](#)



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October 21, 1998

## NEWS WATCH

**Merry-Go-Round View of Baseball Stadiums**

By MATT RICHTEL

**W**hen the final out is called, when the TV crews have packed up, when the last baseball die-hard has been pulled from the bleachers by the authorities, Yankee Stadium will take on the serene quiet of its natural state. And that is the way visitors will find it at the Web site of [Be Here Inc.](#), a Silicon Valley technology company that makes technology to display 360-degree images on the Internet.



The site features 360-degree images of both Yankee Stadium, in the Bronx, and Qualcomm Park, the stadium the San Diego Padres call home. The images, taken from various points inside the stadiums, pan through an arc of 360 degrees.

**Library of Congress Meets World Wide Web**

**A** recent donation to the [Library of Congress](#) is an example of life imitating the Web.

The library, the world's most voluminous, was a recipient last week of a massive database containing the entire contents of the World Wide Web from the first two months of 1997. The 44 computer disks, containing two terabytes of data, include hundreds of thousands of Web sites -- the good, the bad, and the smutty stuff Congress does not want children to see.

The donation was the library's first archive of the new medium, but what was notable about the donation was not just the content, but the format: the disks that contain the Web sites are part of an interactive sculpture.

The sculpture features the disks -- 44 in all, each with 40 gigabytes of information -- alongside four brilliant red computer monitors that intermittently display brief images of the 500,000 Web sites.

Library visitors will have to settle for seeing the sculpture, not the entire contents



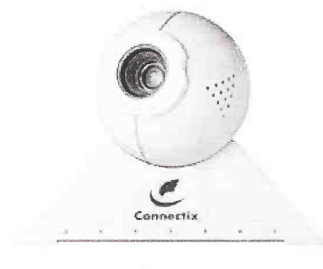
of the database, at least for now.

"It's kind of a laboratory experiment for us," said Guy Lamolinara, a spokesman for the Library of Congress. Lamolinara said that some of the material was not suitable for the collection and that the library was working out copyright issues.

"We will be using it to explore how to preserve digital materials and how to provide access to these materials," he said.

The collection was gathered, stored and donated by [Alexa Internet](#) of San Francisco. The company has developed a toolbar that makes it easy to view Web site background information, like where a Web site is, whether it has a privacy policy or if it has won third-party endorsements. The company's president, Brewster Kahle, said the donation preserved a moment in the life of the ever-evolving Web and could become a resource for sociologists and, eventually, historians who wanted to study our era.

### Videophone Call-Ins on a Cable TV Channel



The Internet has made it possible to perform all sorts of tasks without leaving the house -- banking, working, even dating. Credit [ZDTV](#), a fledgling 24-hour cable channel with programming focused on computer issues, for using the Net to make a virtual community out of yet another group: the studio audience. The network, based in San Francisco, urges viewers to call in to its programs using Internet-based videophones, which transmit not just voices, but faces.

"Larry King says, 'We'll go to Altoona, Pa., for our next call,' and you'll hear the caller," said Greg Derbin, senior vice president for Programming and Production at the network. "With ZDTV, you'll see the caller."

To encourage wider participation, ZDTV will give away up to 10,000 videophones, called Netcams because they transmit their audio and video signals over the Internet. From Oct. 26 to 31, it plans to give away one videophone every hour on its Web site, Drebin said. ZDTV, which is owned by Ziff-Davis and began broadcasting in May, reaches eight million homes.

### Survey Will Track Internet Audiences

The question is not whether people are tuning in to radio programs over the Internet -- they are, albeit not in mass numbers. The question is whether the listeners count.

Toward that end, [The Arbitron Company](#), which measures traditional radio audiences in local markets, last week announced plans to modify its surveys to track which of the station's listeners tune in over the Internet. The new plan is a joint effort between Arbitron NewMedia and [RadioWave.com Inc.](#), the interactive

radio subsidiary of Motorola.

There are 1,708 radio stations worldwide with streaming audio, up from 763 a year ago, said [BRS Media](#), an Internet radio consulting agency. But thousands of others -- among them, the CBS Corporation owns about 160 radio stations and has a policy against streaming audio -- have abstained, in part because they want to be able to measure audiences accurately.

### **Volunteers Answer Questions Via Internet**

**T**he copious information available on the Net is all well and good, as far as Steve Gordon, a New York lawyer is concerned, except that Gordon figures that people spend hours trying to find the one bit of expertise they are looking for. So he decided to put the experts in one place.

Gordon recently launched [Allexperts](#), a Web site that allows visitors to question 2,000 e-mail volunteers on topics like entertainment, computers, and medicine and get a free reply.

Some of the volunteers are not exactly experts -- the television and music volunteers are entertainment fanatics whom Gordon discovered in chat rooms, news groups and on Web sites -- but in the case of the medical sites, most volunteers are doctors or academics, Gordon said.

Gordon says the site did not vouch for the replies, which he says are meant to serve as general information, not specific advice or diagnoses.

### **New Ink-Jet Printer Has a Darkroom Inside**

**O**ne clear trend in electronics is to package ever more functions in a single device, turning a cellular phone, for example, into a beeper, e-mail receiver, message center, bottle opener -- and, by the way, a telephone.

In keeping with this trend, [Lexmark International Inc.](#) of Lexington, Ky., is scheduled next week to ship a new ink-jet printer that is also a digital darkroom. The Lexmark Photo Jetprinter 5770 is designed to print digital pictures without a personal computer.

The Photo Jetprinter has a slot into which users can insert a digital film cartridge. This means users no longer have to upload the pictures onto a PC, format them and send them to a printer, said Patrick King, Lexmark's general manager for Digital Photo Printer.

The printer is expected to sell for \$349, and individual pictures will cost around 60 cents, taking into account the cost of ink and paper, King said. He said that compared with a cost of 40 to 70 cents per print for pictures developed at a conventional lab.

"It's on the upper end," King said. "But the difference is, with our printer, you're only paying for the ones you want."











Ch. 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Bacon's

10/22/98

## At the Library of Congress, a tiny strand of the Web

A new computer-age sculpture symbolizes the institution's role in keeping cyberdata.

By Carl Hartman  
ASSOCIATED PRESS

**W**ASHINGTON — Four bright red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

Although it's a kind of museum, the library doesn't collect statues. Instead, it collects books — the world's biggest collection — plus maps, photographs, films and rarities such as the first printed Bible.

Forty-four tapes lined up alongside the monitors contain the entire contents of the World Wide Web in the months of January and February 1997 — two terabytes of material. The sculpture is just for show, a symbol of the library's role as a collector of cyberdata.

Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

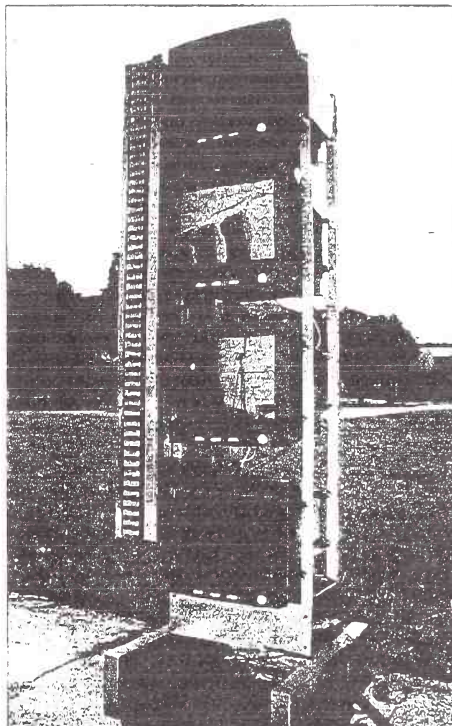
Just as the library carefully keeps its first books from Thomas Jefferson's collection, it is working on plans to hold onto essentials from the Web.

But it can't keep everything. It's trying to figure out what people will need, estimating that the Web now contains 320 million pages and will grow to a billion by the year 2000.

"Every week 1 percent of all Web pages are removed or changed," said Robert Zich, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994 when we first started."

A terabyte of data is roughly equal to 1,000 copies of the *Encyclopedia Britannica*, said Brewster Kahle, the president of Alexa Internet, which donated the sculpture.

The monitors in the sculpture show only a sample of what is on the tapes



Library of Congress / Associated Press

**A computer-monitor statue shows portions of 44 tapes containing everything on the Web in two months of '97.**

By touching the surface of a screen, a viewer can hold the image for five seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash on and disappear.

### For More Information

■ The tapes can be seen at  
<http://www.alexia.com>





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Bacon's

## GEEK NOTES

## Disks to the Library of Congress

The Library of Congress, the world's most voluminous library, grew by the equivalent of 2 million books on a single day last week. But rather than build thousands of new stacks to accommodate the growth, the library could fit the new addition into a small filing cabinet.

That is because the latest donation to the library came in the form of computer disks — 44 of them, each carrying 40 gigabytes of information. The disks include a snapshot of the entire contents of the World Wide Web during the first two months of 1997, including each of the millions of individual Web sites — the good, the bad, and even the smutty stuff Congress does not want kids to see.

The collection was gathered, stored and donated by Alexa Internet of San Francisco, which has developed a tool bar that makes it easy to view Web-site background information like where the site is located, whether it has a privacy policy, or if it has won third-party endorsements or awards. The company's president, Brewster Kahle, said the donation preserves a moment in the life of the ever-evolving Web and can become a resource for sociologists and, eventually, historians who want to understand our era.

Alas, while the disks are on display at the library — as part of an interactive sculpture — their contents are not — yet.

"It's kind of a laboratory experiment for us," said Guy Lamolinara, a spokesman for the Library of Congress, noting that some of the material was not suitable for the collections, and the library was still working out copyright issues. "We will be using it to explore how to preserve digital materials, and how to provide access to these materials."

Kahle, who also oversees the non-profit organization Internet Archive, said the Web is growing at a rate of 1.5 million pages a day. Sounds as if the Library of Congress is in



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OCTOBER 25, 1998



Baton Rouge

# History embraces the online age

## Library of Congress harbors world's largest collection of cyberdata

**By Carl Hartman**

ASSOCIATED PRESS

WASHINGTON — Four bright red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

Although it's a kind of museum, the library doesn't collect statues. Instead, it collects books — the world's biggest collection — plus maps, photos, films and rarities like the first printed Bible.

Forty-four tapes lined up alongside the monitors contain the entire contents of the World Wide Web in the months of January and February 1997 — two terabytes of material. The sculpture is just for show, a symbol of the library's role as a collector of cyberdata.

Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

Just as the library carefully keeps its first books from Thomas Jefferson's own collection, it is working on plans to hold onto essentials from the Web.

But it can't keep everything. It's trying to figure out what people will need, estimating that the Web now contains 320 million pages and will grow to a billion by the year 2000.

"Every week 1 percent of all Web pages are removed or changed," said Robert Zich, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994 when we first started."

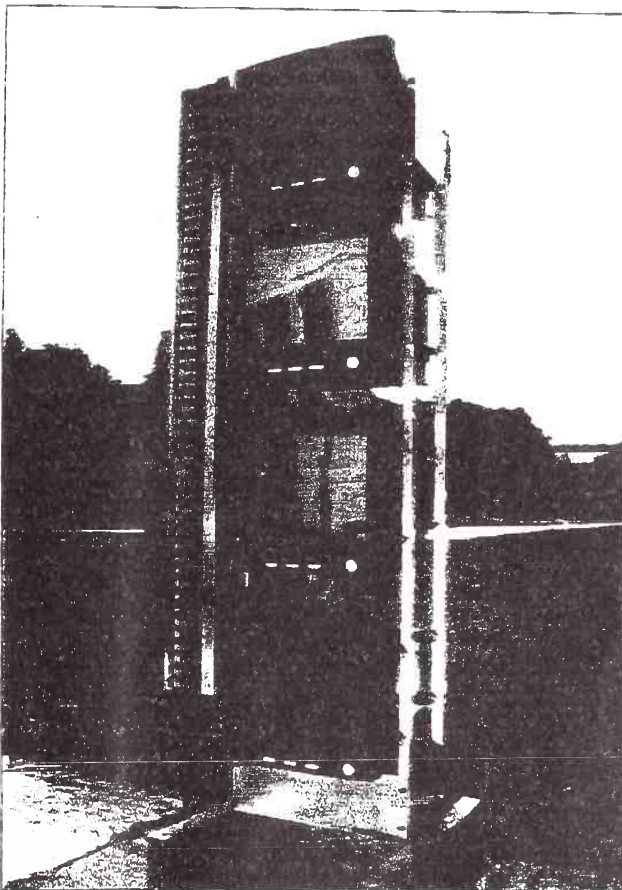
A terabyte of data is roughly equal to 1,000 copies of the Encyclopedia Britannica, said Brewster Kahle, the president of Alexa Internet, which donated the sculpture.

Kahle pointed out that little has been preserved of the first radio and TV programs, and historians would like to have them now.

The monitors in the sculpture show only a sample of what is on the tapes.

By touching the surface of a screen, the viewer can hold the image for five seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash on and disappear.

(The tapes can be seen at <http://www.alexai.com>)



ASSOCIATED PRESS PHOTO

A sculpture, featuring four bright red monitors bolted together and flashing screens too fast to read, was presented this month to the Library of Congress, the first sculpture depicting the computer age.



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## Alexa's Gift to the Government

by John Alderman

5:45 p.m. 14.Oct.98.PDT

While it may not be the Library of Alexandria, it contains more information than that great temple of learning did. And it fits onto 44 tapes.

The Library of Congress on Tuesday unveiled a sculpture of the Web donated by Alexa. Located in the Library of Congress Digital Library visitor center, it flashes random pages taken from the more than 500,000 Web sites archived by Alexa since 1996.

"The Library of Congress keeps much of the nation's creative materials, so we thought we should be preserving the electronic material as well," said library spokesman Guy Lamolinara.

Alexa first contacted the library in 1997 about making a donation of its Web archives. Rather than just handing over the 44 tapes in a plain cardboard box, the company commissioned an interactive digital sculpture. Digital artist Alan Rath used the tapes and four monitors to create "World Wide Web 1997: 2 Terabytes in 63 inches."

"We look at it not only as a donation, but as a lab experiment," said Lamolinara, adding that the library would, over time, investigate different uses for the material.

If users want hands-on interaction with the materials, they'll have to wait. No one at the library is yet sure how to deal with such a mass of information, and no front end has been built to comb through it. Alexa has no plans to help codify the snapshot.

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"Our main point was, as long as we're gathering this stuff, let's put it somewhere where it will get care and feeding," said Bruce Gilliat, co-founder and general manager of Alexa.

"We haven't written code that lets people search through terabytes of information," Gilliat said. "It's as if we can direct someone to the right section, hall, or aisle, but not give the exact Dewey decimal number."

The library's larger task may be deciding what's relevant. The library, after all, is not in the business of preserving the mountain of written materials generated in offices around the world.

"We don't even do that with analog material," said Lamolinara. "A lot of people think we have every book printed, but that's just not true."

Alexa was founded in 1996 when Gilliat and Brewster Kahle, now the president, grew frustrated with the search engines available on the Net. They wondered what would happen if the "community of users could effortlessly pool [their] collective experience and add human intelligence to navigation."

The result of that pursuit has been Alexa. From the company's San Francisco base, computers crawl the Internet, looking at every available page and indexing and archiving the content.

Users read the Alexa archives via a toolbar that functions inside the user's browser. When a user visits a site, Alexa recognizes the location, identifies related links, and allows the user to comment on the site. If a site is no longer live, the toolbar suggests an archived version, if one is available.

Gilliat feels the company, now 35 employees strong, provides more than the navigational tool. Alexa's Web snapshots can offer a clearer view of the growing datastream that is the Web, he said. 300,000 domains in 1996 to over a

million in 1998 is a big task.

With the donation to the Library of Congress, at least some of the data has a permanent home.

***Related Wired Links:***

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## Alexa Monitors Surfing Conditions

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Internet Explorer add-on provides contact information, related news, and usage stats for each site you visit.

by Glenn McDonald, special to PC World  
October 27, 1998, 4:28 p.m. PT

Have you ever run into this problem? You want the phone number and address of a company you just read about--say, Acme Widgets--so reasonably enough you go online to [www.acmewidgets.com](http://www.acmewidgets.com). Trouble is, the Acme Widgets site suffers from a poor design, so you end up clicking through page after page looking for simple company contact information.

This happens to me all the time, and I silently curse the chucklehead Web designers who refuse to put critical information in obvious places. Luckily, a useful browsing utility from Alexa Internet can ferret out all manner of helpful data about the site you're visiting and arrange the information in an unobtrusive toolbar at the bottom of your screen.

### Fast, Friendly and Free

Alexa 3.0 is currently in beta and available for free at Alexa's Web site (see link at right). It's a fast download--it took less than a minute over my 56-kbps dial-up connection--and it embeds itself directly into Internet Explorer with no set-up or installation hassles. (You need IE 4.0 or higher for this beta; a Navigator version is in the works, and previous versions of Alexa work with other IE versions and Netscape Navigator as well.)

Alexa provides contact information for the registered site owner, as well as a five-star rating system for four criteria--traffic, speed, freshness, and overall quality--as determined by Alexa's periodic sweeps of the Internet. Quality is determined by votes from other Alexa users. For selected sites Alexa also provides independent ratings borrowed from Yahoo Internet Life and eBlast, a Net directory run by Encyclopedia Britannica online.

All of this data is available on four separate toolbars that you can position horizontally or vertically in your browser window. Only one toolbar is visible at a time.

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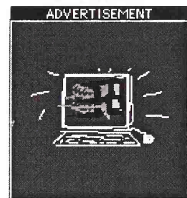
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The toolbars don't take up much real estate when positioned horizontally. When a toolbar is vertical, however, it occupies about a quarter of your browser window.

#### **News and Finance Links**

This latest version adds a new feature that provides related news and financial information from NewsReal's Industry Watch service. Go to Microsoft's Web site, for example, and you can click to Alexa's Related News and Finance page, which provides detailed company information (quarterly results, key competitors, stock quotes) as well as recent news stories and press releases. An Alexa spokesperson estimated that around 5000 companies are currently indexed with the News and Finance feature.

The new beta generally performed very well in my testing, although you often have to wait several seconds after a page loads up for Alexa to gather site information from its databases. Keep in mind that Alexa by no means catalogues all Web sites, but it does gather information from several sources and will have at least some supplemental data for most business sites.

Another interesting note: Alexa gathers contact information directly from InterNIC and other Web domain registration companies. I surfed to a friend's Web page dedicated to the San Francisco art scene and was surprised to see his home phone number and address in the Alexa toolbar. It's perfectly legit, and Alexa isn't the only way to get that kind of information, but most people don't know that giving out information to a domain registration company means essentially publishing it. If you have a personal or business Web page registered under a unique domain name, and you don't want specific addresses or phone numbers made available, contact your Internet registration organization.

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# Netscape Communicator 4.5

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The best thing about Navigator 4.5 is its new array of search tools, which help you move more intelligently through the morass of Web content.

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- [Communicator 4.5 release notes from Netscape](#)
- [Alexa navigation tool info from Alexa Internet](#)

## Browsing



### Performance

For Communicator 4.5, Netscape focused its efforts on stability and ease of use. The new Communicator is at least as stable as its predecessor, and its "Smart Browsing" features, explained below, make navigation simpler. On such a short production schedule, though, something had to give, and Netscape chose performance.

Not that 4.5 is a laggard, by any means. In our HTML- and GIF-loading tests, Communicator 4.5 outperformed 4.07 by a few percentage points—it's not a huge improvement, but at least you'll know 4.5 isn't a step backward. JavaScript performs more smoothly, and Java applets will load and initialize faster, too (though once they load, 4.5 will run them about as fast as its 4.0x ancestors). These additions are nice touches, but they're probably not reason enough to convert from a fast non-Netscape browser. Most of Netscape's performance enhancements are aimed at the Communicator 5.0 project, and the company says we should see significant improvements when it finally ships.

### "Smart Browsing"

One thing no one can debate is 4.5's truly innovative browsing experience—what Netscape calls Smart Browsing. Communicator's new interface helps you navigate the morass of Web content with a minimum of fuss. The new Internet Keywords feature, for instance, lets you type a product name, trademark, or other keyword into the location field; the browser then searches its keyword database for an appropriate site. For example, if you type Ford Mustang into the Location field, 4.5 takes you to the Ford Motor Company Web site. If a keyword can't be found in Netscape's database, the request passes to Netcenter's Excite search. Overall, we like the feature, but it has a few wrinkles. Since Internet Keywords bounces requests for words such as *scripting* to a Web search rather than the more standard [www.scripting.com](http://www.scripting.com), many small Internet sites that have invested in certain domain names justifiably complain that Netscape is hurting their traffic. Netscape thoughtfully provides an option to disable the feature if it's not your speed.

The other half of Smart Browsing is somewhat less controversial. To view sites similar to the one you're viewing, just click the new What's Related


button, and you get a drop-down menu of related links ranging from related-product reviews to competing Web sites. The links are pulled from a customized Alexa database, so the results are similar to those you'd find with Alexa's IE plug-in. In an interesting move, Netscape recently announced TuneUp for IE, an add-on that brings the entire Smart Browsing system to Internet Explorer users.



A click of the What's Related button on the Ford Web site produces a list of competitors--great for smart shoppers and researchers.

## Content filtering

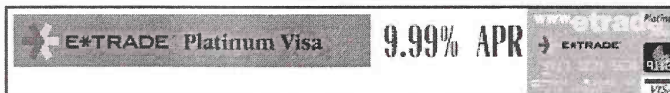
Parents and managers can block access to objectionable Web content with Nav 4.5's NetWatch, which supports PICS-based content filtering. (IE has offered content filtering since version 3.0, so it's long overdue from Netscape.)

Slicker setup and interface. Cool! 

### Where to shop

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Monday, October 12, 1998

LEXIS®-NEXIS® Print Preview

Page 1

# LEXIS®-NEXIS® Universe

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The Washington Post

October 11, 1998, Sunday, Final Edition

**SECTION:** OUTLOOK, Pg. C01

**LENGTH:** 1836 words

**HEADLINE:** Your Past Is Your Future, Web-Wise

**BYLINE:** Joseph D. Lasica

**DATELINE:** SAN FRANCISCO, Calif.

**BODY:**

Our past now follows us as never before. For centuries, refugees sailed the Atlantic to start new lives. Easterners pulled up stakes and went west to California. Today, however, reinvention comes less easily and second chances seem more remote. You may leave town, but your electronic shadow stays behind, as anyone who has ventured onto the Internet well knows.

We often view the Internet as a communication medium or an information-retrieval tool, but it's also a powerful archiving medium that takes snapshots of our digital lives—which can be stored forever.

It's not just official documents or consumer profiles about us that are being collected, but the very essence of our daily online existence: Our political opinions, prejudices, religious beliefs, sexual tastes and personal quirks are all becoming part of an immense media goop that is congealing into a permanent public record. What is different about the digital archiving phenomenon is that our beliefs, habits and indiscretions are being preserved for anyone to see—friends, relatives, rivals, lovers, neighbors, bosses, landlords, and even obsessed stalkers.

Take all those ordinary Web pages that many of us have created in a burst of enthusiasm with the new medium. People assume that their home pages disappear once they pull the plug. Not necessarily. Sure, browsers and search engines give you a "404: File Not Found" message when you call up outdated Web pages. But those pages live on in other electronic nooks and crannies. Since 1986, the Internet Archive, a kind of digital warehouse, has been trolling the Web and hoarding everything it comes across—text, images, sound clips. Every two months, it scoops up the entire Web and stores the results on its virtual shelves. It has preserved my expired site, and it may well have yours.

Similarly, postings to the Internet's 33,000 news groups may fall off the edge of Usenet after a week or so, but they live on in databases such as Deja News and the Internet Archive. Marie Coady, a freelance writer in Woburn, Mass., was appalled to discover that her posts to online-news, a small, cozy listserv of 1,350 news professionals, was available to anyone through dozens of search engines on the Web. "I consider it an invasion of privacy to have words typed in response to a query chiseled in stone," she said. "In light of our litigious society, it could be dangerous to post any message at all."

Many moderators post occasional notices about a list's public archiving policy. But not all do, and few users read the fine print anyway. "The odd thing is, we perceive the Net as a conversation and not as public record, and it turns out to be public record to a larger extent than people are aware of," said Bruce Schneier, a cryptography consultant and co-editor of "The Electronic Privacy Papers," a 1997 book. "You can easily imagine in 20 years a candidate being asked about a conversation he had in a chat room while he was in college. We're becoming a world where everything is recorded."

Beyond the question of informed consent lie larger questions: Should all of this electronic flotsam and jetsam be archived in the first place? What are the consequences for us if our digital footprints survive indefinitely? Who should decide whether they do survive?

The answers are hardly comforting, especially for those given to strong displays of emotion or opinion online. "We're now entering an era where tens of millions of people are speaking on the record without any understanding of what it means to speak on the record, and that's certainly unprecedented," says David Sobel, general counsel for the Electronic Privacy Information Center in Washington. "It is suddenly becoming impossible to escape your past."





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## Infrastructure

October 5, 1998

### Alexa Bulks Up To Field Queries From Its Browser Companion

*Tool for finding related Web sites will be  
in Navigator 4.5 and IE 4.0, putting a  
burden on company's infrastructure*

By Sarah L. Roberts-Witt

Delivering a contextual, useful, and fun browsing experience and doing it quickly is a tall order, especially when the goal is to provide that service for each and every person on the Web.

But Brewster Kahle, president, CEO, and a founder of Alexa Internet, makers of the popular new browsing companion Alexa, is prepared to fill it. "We're trying to build a piece of Internet infrastructure, and we're trying to hit navigation for users in a different way by providing a surf engine," said Kahle.

Alexa is a nifty little toolbar utility that supplies surfers with a list of 10 contextually related sites; access to the 404 database, which holds copies of more than a million defunct Web sites; and access to Encyclopaedia Britannica's database. Also sitting on the toolbar are context-sensitive advertisements, which represent Alexa's main source of income.

The full version of Alexa 1.0, which runs as a separate toolbar, is available as a free download for Netscape Navigator and Internet Explorer 3.0. The recently released version 2.0 for IE 4.0 completely

### At a Glance

Company: Alexa Internet

Headquarters: San Francisco

Business: A Web surf engine

Hosting Facility: Frontier Global  
Center, Sunnyvale, Calif.

Average bandwidth utilization: 5  
Mbps for outbound; 15 Mbps for  
inbound when crawling, and 1  
Mbps at other times

Crawling servers: Two dual-  
processor Pentium Pros with 256  
Mbytes of memory and 0.5  
terabyte of disk space running  
proprietary software on Solaris;  
servers crawl at rate of 1 million  
pages per hour

Serving servers: Six 300-MHz  
Sun Ultra Enterprise IIs with 2  
Gbytes memory and 2 Gbytes  
disk space running proprietary  
software; servers receive 2.6  
million queries per day

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### **Mecklermedia**

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integrates Alexa into Microsoft's browser. The Netscape front is covered as well: In June, Alexa and Netscape announced that Alexa's related sites feature would be built into Netscape Navigator and Communicator 4.5.

Current estimates put the number of Alexa users at 200,000, a figure that could jump to 50 million or more. "When we met with Netscape, they said, 'Do you realize that half the people on the Internet will be sending a request to your server?' " said Kahle. "We said, 'No problem.'"

Supporting Alexa's functionality is a hearty infrastructure based on a straightforward model: gather, store, data-mine, and serve.

The gathering portion involves crawling the Web for information, both text-based and graphical, to add to Alexa's current catalog of 20 million sites. Assigned the task of crawling are two dual-processor Pentium Pros with 256 Mbytes of memory and 0.5 terabyte of disk space running internally developed, proprietary software, which is rewritten approximately every six months.

The data that the crawling machines turn up is sent to two Storage Tech tape robotics systems, each of which has several 1.5-terabyte disks. One of the machines is used for data-mining purposes, and one for historical record and the 404 service. "We currently have about 12 terabytes of data on those machines," said Kahle, "which is a little more than half the size of the Library of Congress."

But things really get interesting in the data-mining portion of the equation. Part of what makes Alexa unique is that, unlike traditional surf engines, it examines surfers' usage patterns to determine which sites will be of most interest to the individual user.

With the exception of Aptec, which is used to data-mine text files, the software that discovers those patterns is internally developed.

The hardest-working machines in Alexa's network are those doing the serving. These six machines--which handle 2.6 million queries per day--are 300-MHz Sun Ultra Enterprise IIs with 2 Gbytes of memory and approximately 2 Gbytes of disk space, running proprietary, internally developed database and Web server software.

To keep the pace pumping, Alexa uses XML instead of full HTML for outgoing responses. Alexa's outbound traffic peaks at around 5 Mbps.

One more server inhabits Alexa's site: the ad server. It's a Sun Ultra Enterprise II with the same configuration as the serving servers. It's running NetGravity as well as proprietary ad-targeting software. Alexa currently serves between 50 million and 60 million ad impressions per month.

Initially, Alexa housed its server farm at the company's San Francisco

headquarters. However, like many other Internet heavyweights, it decided to colocate its site at Frontier GlobalCenter in Sunnyvale, Calif., making the move in mid-September.

"We crawl the Net, which means we pull bits, whereas most others push bits, and Frontier GlobalCenter was willing to work with us on pricing and what we needed." For inbound traffic, Alexa averages 15 Mbps during crawling periods and 1 Mbps at other times.

The challenges keep coming for Alexa. Its Version 3.0, planned for a launch this month, will allow surfers to browse in business, casual, research, and comparative shopping modes. "Alexa 3.0 is going to put a little more work on our servers," said Kahle. "But we'll just keep throwing on more hardware and developing better and more refined algorithms."

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Thursday, October 8, 1998

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Page 1

# I N Q U I S I T

## Agent Report

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*Click here to jump to the first keyword your agent found.*

**Organizing the chaos that is the Internet, // Alexa successfully guides users through maze of information**  
(Austin American-Statesman: 10/07/98)

The Internet's vast resources are often compared with a library with all the books dumped on the floor. That's not a pretty picture. But when search engines fail by retrieving too much information to handle, the analogy feels close to the truth.

Alexa ([www.alexa.com](http://www.alexa.com)), named for the great library of Alexandria, Egypt, that was destroyed by fire in the third century, is a unique effort to both preserve the body of information contained in the Internet, where countless pages are scrapped every day, and to provide intelligent assistance in navigating its random paths.

During the past six months, an Alexa toolbar residing at the bottom of my browser has been feeding me site stats -- data about each site I visit -- and offering recommendations on other sites that I might try for related information.

Suppose you go to the Dead People Server, a site that has exhaustive information about those no longer with us, organized alphabetically ([www.city-net.com/~lmann/dps](http://www.city-net.com/~lmann/dps)). When I'm there, Alexa shows me other sites like Find-a-Grave, the Political Graveyard, Biography, We'll Always Remember (the home page for dead rock stars) and, of course, Dead Elvis' Page.

Moving on to Biography.com, I can click on another button to find out who owns this site (the Biography Channel) with address, phone contact number, the domain's registration date and other information -- like how the site ranks in terms of Web visitors, its speed, freshness, number of pages and how many other sites link to it.

If available, there are also site reviews and the collaborative ratings of Alexa users. (You're offered the opportunity to vote on whether you like each site.)

And yes, there's an ad, a very small ad, that changes as I move to a new site.

There's also a mysterious button that's temporarily grayed out, but will be made active again this month. When this "archive" function returns after some reconstruction, Alexa will allow you to retrieve dead Web pages -- ones that used to be there but now yield a "404 Not Found" message when you ask for them.

Alexa pulls off this miracle by dipping into its 12 trillion byte archive, which contains copies of Web pages that it's been collecting since early 1996. It's been taken off line for work because the archive just got too big to serve back quickly.

I confess that I am hooked on Alexa. But what is it? Not exactly a search engine, not really a Web site directory . . .

"The term that seems to be sticking is surf engine," said Brewster Kahle, chief executive of Alexa Internet, which has its headquarters in the Presidio in San Francisco. Kahle also founded the nonprofit Internet Archive of the Web to record the history of cyberspace in 1996. "It's an Internet assistant, like having a really smart friend with you."

Trend watchers take note: Wired magazine's September issue deemed surf engines "wired" and portals "tired." Portal sites try to hold your attention and keep you, while Alexa travels out on the Web with you and guides your path.

Surfing with Alexa gives consumers and business people information that

<http://www.inquisit.com/A/A7A=A1-AustinAmericanStatesman-1008.02015&D=153315>

Thursday, October 8, 1998

Inquisit Article Full Text

Page 2

helps them make "information trust decisions," according to Kahle. For each of the 1 million Web hosts documented and ranked in popularity by Alexa, information on who's behind it and where it's located is collected from official domain name registration information. Site reviews and ratings come from Alexa partners, such as Yahoo Internet Life and the Recreational Software Advisory Council.

But the collective intelligence behind the related links feature that makes Alexa unique comes from users like me and you. When activated next to our browsers, Alexa anonymously tracks the decisions that we make about what's worthwhile or worthless, analyzing our clicking on or clicking away from pages on the Web.

It calculates the paths that we choose and the time that we spend visiting. Then the information is used in aggregate to help inform future users. It could be called a recommendation engine. Overall Web traffic patterns, link structures and the content of Web pages figure in to the compilation of related links.

The usage paths are separate from information that could identify an individual: Alexa says it follows a privacy policy ensuring that any information from an individual will not be provided to a third party. I'm sure that some people won't trust that promise on privacy, but it's good enough for me.

The other nice thing about Alexa: You don't have to buy it. The newest version of Netscape Communicator (4.5) has the Alexa links feature embedded as its "What's Related" component of Smart Browsing. Internet Explorer 4.0 has a version of the full Alexa service that can be installed in less than a minute.

You may also download Alexa for Netscape Navigator 3, Communicator 4 or Internet Explorer 3 running on Windows 95 or NT 4.0. An "alpha" version for the Macintosh is available for testing.

Don't wait. Get it now.

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\_\_\_\_\_via IntelliX\_\_\_\_\_

(A1:AustinAmericanStatesman-1008.02015) 10/07/98

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Monday, October 12, 1998

LEXIS-NEXIS® Print Preview

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Your children and grandchildren not yet born will be able to reconstruct a record of your digital life--not just the good stuff but also the best-forgotten postings to alt sex-ish or tee-nude. The Web shrine you once erected to an old flame, with its hyperventilating vows of eternal devotion, may give pause to a new lover in your life. The union solidarity page you put up at your first job--years before you were bucking for senior management--may come back to haunt your efforts to get a promotion. And who would have predicted that your Senate candidacy would go down in flames when your political opponent uncovered the image-rich homage to porn star Ashlyn Gere you posted in college?

Most people don't have posterity in mind when they fire off notes or post Web pages. Observes Schneier: "When you're in college and posting things online, you're young and immortal and you don't think about the impact your words will have five minutes from now, much less five, 10 or 20 years down the road."

We can already see the outlines of this new world. When you apply for a job in the high-tech sector, there's a fair chance your prospective employer will use a search engine to scout out your online postings, from late-night musings to intemperate rants fired off to a political news group. Would an employer's decision be colored by information that has nothing to do with a candidate's job qualifications, such as your out-of-the-mainstream religious beliefs, sexual orientation, HIV status or personal habits? Absolutely, and without apology. After all, "character" counts, too.

Federal law makes it a crime for agencies to compare most digital information about U.S. citizens, points out Fred Cate, a law professor at Indiana University and author of "Privacy in the Information Age." But nothing prevents private companies or individuals from doing so. Criminal convictions, driving records, property records and voter registration records might be available with a few keystrokes.

Should employers, neighbors and descendants not yet born be able to poke around in the digital attic for information about you?

Cate believes there are good reasons why we shouldn't be so concerned. "It's the democratizing of Big Brother, and that's not such a bad thing," he says. "You can find out as much about your boss as he can about you. I'm not really happy that someone down the hall can follow me and make a database about me, but that's the way it is in the digital age. If your feelings get bruised, tough. If the information's true and not distorted, then you're stuck with the things you said online years ago. I don't see this as a privacy issue."

Perhaps not in the narrowest sense. But if every online expression becomes fodder for somebody's professional, personal or political agenda, clearly we lose certain freedoms of expression in the bargain. Do you really want to live next door to Big Brother, even a more democratic one? Sobel says. "If you define privacy as the right of individuals to control information about themselves--as we do--then mega-archiving systems clearly raise significant privacy issues. These systems convert every passing thought and contemporaneous musing into a permanent, retrievable record--without, in many cases, the knowledge or consent of the creator."

Even Brewster Kahle, who founded the nonprofit Internet Archive ([www.archive.org](http://www.archive.org)) and its commercial offshoot, **Alexa Internet** ([www.aol.com](http://www.aol.com)), says, "There are some tricky issues here. A lot of this material is public, but is it really meant to endure?"

What Kahle is doing is nothing less than astonishing. Alexa's 32 employees, working in a century-old building in San Francisco's Presidio, sends out "spiders" to crawl the Web and Usenet and store the text, video and audio on a digital jukebox tape drive. It takes about two months to capture all 300 million publicly accessible Web pages. So far they've scooped up 10 terabytes of content, or 10 trillion bytes.

Kahle says he launched his project because "we need to preserve our digital heritage. Unless we start saving it, every passing day we're losing the record of one of the great turning points in human history." His Internet Archive and Alexa have drawn widespread praise from academics, historians and Net luminaries concerned that the Web's pioneer days may soon become irrevocably lost. For researchers and scholars, it's a field day. For the rest of us, it's a mixed blessing.

Sobel points out that individuals can't even prevent private indiscretions from winding up as part of the Internet's global voycuzsm machine. "I just got a phone call from a distraught mother whose 16-year-old daughter's ex-boyfriend posted nude photos of her on the Web. The photos were consensual when they were taken. So suddenly it's part of the public domain, and even if the mother persuades him to take them down, he may no longer have control over how long this stuff is out there. This teenage girl may have to live with that for the rest of her life."

Kahle offers another example: "The president's personal home page is probably in our archives now--the person who'll become president in 20 or 30 years. You know that he or she is the kind of person who already has a Web page up in college."

Are we condemned, then, to a future where journalists will pore over every online college-age musing of a prospective president? It appears that way. "I'm still struggling with the issues raised by this," Sobel says. "We need a public debate to redefine the concepts of what should be private and public. Should anyone be able to type your name into a search engine and come up with public records about your private life? What good are laws that expunge a crime from your record if the old records remain accessible to anyone on the Net? What about information that's misleading, inaccurate, or that you had no idea was out there in cyberspace?"



Monday, October 12 1998

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Kahle is well aware of the debate, and he's working with legal experts, historians and privacy advocates to determine the best way to make archived material available. "I used to be very oriented toward privacy, trying to keep track of who knows what about me," he said. "I've become less fanatical about it, because I find that it's more valuable to be found than for me to be obscure. For those who don't want to be found, we should let them be."

One may well ask: Do we have that option anymore? As the Net becomes ubiquitous, its underlying essence of interconnectedness and community come with a price: the loss of anonymity. We are being drawn forcibly, inexorably, into the global town square.

That is no reason to avoid the Internet (as if we could!). It is becoming inextricably woven into the fabric of our everyday lives. As it should be, for the Net is a gift, connecting us with like-minded individuals around the world and allowing us to interact in soul-summing ways. But we need to be aware that our digital footprints are permanent ones.

Once, words were spoken and vanished like vapor in the air. No longer. Our pasts are etched like a tattoo into our digital skins. For better or worse, we're no longer a people who can reinvent ourselves.

Joseph Lasica writes frequently about new media.

**GRAPHIC:** Illustration, PETER ALSBERG

**LANGUAGE:** ENGLISH

**LOAD-DATE:** October 11, 1998

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**Client ID:** 160

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**Search:** General News; alexa internet

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## Barksdale shows off Netscape's Custom Netcenter

 By Jim Kerstetter, PC Week Online  
October 8, 1998 5:29 PM ET

NEW YORK -- **Imagine a day when every corporate Web site can be a portal. Every site gets to provide content, and every site is a destination point for Web users.**

Nonsense? Heresy? It just ain't gonna happen? Don't tell that to Netscape Communications Corp. CEO James Barksdale. In fact, Barksdale thinks the proliferation of corporate portal sites is just a year away. And, of course, they'll have help from Netscape's own Netcenter, browsers and enterprise software.

"We feel like our destiny lies in the coming together somehow of all three of those things," Barksdale told his Thursday afternoon keynote audience here at Internet World.

Barksdale used his address to unveil the latest ripple in the Mountain View, Calif., company's strategy for the growing Netcenter portal site. It's called Custom Netcenter. Netscape will partner with customers such as the U.S. Department of Defense to blend content from both organizations. Netscape will provide whatever content or resources the Defense Department wants for its site. The end result is that both sites get more visitors, and Netcenter comes closer to Barksdale's goal of becoming the most popular consumer Web site by the year 2000.

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Barksdale took his audience on a tour of the Netcenter site, touching on Netcenter Contact, a personal contact directory that will be rolled out soon for subscribers to the My Netcenter personalization service; Fax Center, which will provide users with fax services; and Smart Browsing, a feature in Netscape Communicator 4.5 that allows users to type in regular words on the URL line and go right to a site. It also offers a pull-down menu of other sites that have the same information.

### On PC Week Radio:

Listen to a rebroadcast of [Barksdale's Internet World keynote](#).

Smart Browsing is based on Web directory technology from San Francisco startup Alexa Internet Inc. And it's the same technology that another company, Network Associates Inc., is banking on for its new portal site.

The Santa Clara, Calif., company came to Internet World to demonstrate McAfee Online, which will be Network Associates' entry into the portal market later this month.

At the heart of McAfee Online is the Traveling Portal technology. Network Associates will provide users with an Internet Explorer browser that contains an ActiveX link directly back to the site. Using the Alexa index, it will display other sites a user may want to visit right at the bottom of the screen.

McAfee Online, a new company division with more than 50 employees, will focus on service and support for software users. In addition to offering the usual mix of news, software, music and book purchasing, it will have a subscription-based service called McAfee Garage 1.0. When users "park" in the garage, they can get an online virus scan, update or deinstall software, and obtain other computer advice.

Users will be able to make a connection to the site with an encrypted Secure Sockets Layer link, said Srivats Sampath, vice president of worldwide marketing at Network Associates.



Top of Page

# Alexa Internet serves as a guide to Web sites

If you are a frequent Web surfer and haven't encountered Alexa Internet, make your next connection to [www.alexa.com](http://www.alexa.com).

Alexa is one of those concepts that make you want to say, "that really makes sense. I wish I'd thought of that."

Alexa Internet is a "surf engine" that travels with you from site to site. Unlike a Web portal, which is more like a "doorway," Alexa is more like a guide by your side,

always ready to lend a helping hand.

So what does this guide look like and do?

Alexa is a free Web navigation toolbar available at the bottom of your browser that provides some very useful information including stats on the site, related links and access to reference materials. In addition there is an archive button, a voting button, and yes, a small, nonobtrusive advertisement. (How else would it be free?)

Clicking on stats brings up a frame containing information on the site owner from official domain name registration information, ratings and reviews of

the site, site statistics and electronic commerce endorsements.

For instance, the stats for [www.onsite.com](http://www.onsite.com) indicate that the site is registered to Journal Sentinel Inc. along with the address and phone number information. It has been online since March 5, 1996. There are ratings from Alexa visitors as well as the Yahoo rating and the number of visits.

Additionally the number of links, the number of pages, speed and freshness ratings are available.

The more Web surfers that use Alexa, the more valuable it becomes, due to the collective participation of the users.

Users are able to suggest related sites, but the software also gathers, manages and analyzes usage paths to identify similar sites.

Born from the vision of navigation "that learns and improves over time with the collective participation of its users," Alexa marks a new class of software.

The desktop reference button links to Web searching, plus a desktop reference library including Britannica Internet Guide, Encyclopaedia Britannica, and Merriam-Webster Dictionary and Thesaurus.

It doesn't take long to surf the Web to encounter the error "404 - Not Found." Alexa has been

archiving Web pages since 1996 and so far has collected more than 500,000 sites.

Unless you are looking for a very small site, chances are good that the site that you are trying to find is one of those archived. When this error is encountered, the software looks to see if there is an old copy on the Alexa servers in San Francisco.

If one is found, the archive button changes to a blue page icon. Clicking on this icon retrieves the former site from the archive.

Users are encouraged to vote on whether a particular site is useful and these tallied votes are available to all.

If you have a Web site, you will find the stats information valuable.

Probably more valuable, however, would be to check the stats of your competition.

Alexa Internet is a small 700K download. It works in parallel with either Netscape's or Microsoft's browsers version 3.0 or above.

A Macintosh version is currently undergoing testing.

If you are a Microsoft Office 97 user and did not get around to downloading and installing the recent service pack upgrade, you can wait a little longer.

Due to reports of install problems, Microsoft has removed the upgrade and is working on a fix for the install problem. If you

downloaded the upgrade and were able to successfully install it, you are fine and won't need the new version as Microsoft indicates that the install portion is the only part that is changing. Problems were reported from users who had not installed the previous service update.

Visit [www.microsoft.com/office](http://www.microsoft.com/office) for further information as well as information on the upcoming Office 2000.

Judy Brown is emerging technology analyst with the Wisconsin Technical College System. She also coordinates the corporate partner program for PC Week, a publication of Ziff Davis Inc. She can be reached electronically at [judybrown@excpc.com](mailto:judybrown@excpc.com).

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## Computer seller to host trade

Entre P.C. Solutions Inc., a Brookfield-based computer seller, will host a computer trade show/seminar Thursday for Milwaukee businesses interested in networking with computer firms.

"Connectivity Fair 1998" is the seventh annual event and will feature 40 vendor booths, six keynote speakers and 12 software training seminars at the Country Inn Conference Center,

2810 Golf Road.

The one-day event will end

The seminars such as "Exploit with Microsoft," "Keys to Attracting Technical People," "Status of Government Y2K Initiative."

For more information, call ext. 3122.

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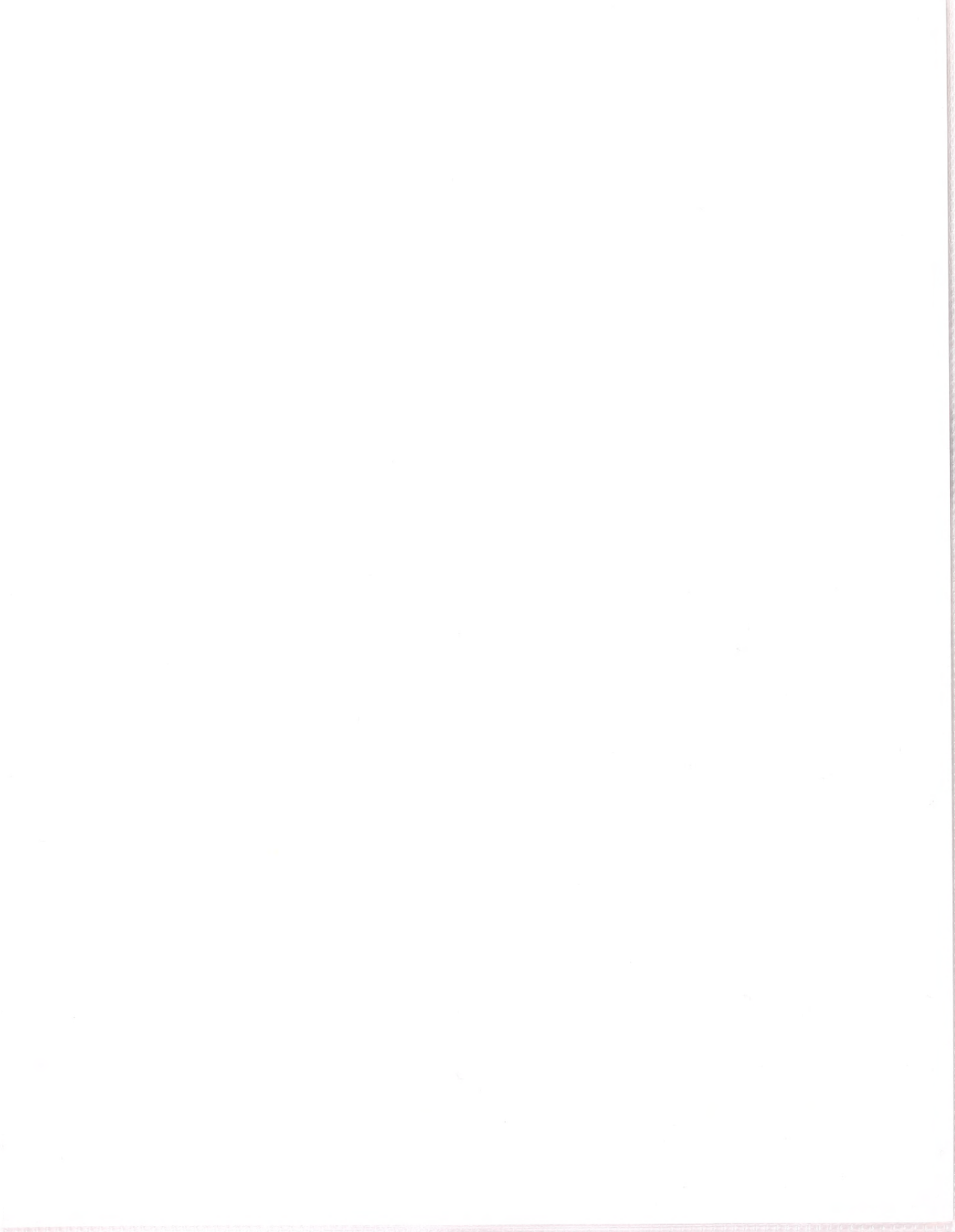
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FNS DAYBOOK

**OCTOBER 12, 1998, MONDAY**

**EDITION:** FINAL

**SECTION:** GENERAL NEWS EVENTS

**LENGTH:** 112 words

**HEADLINE:** EVENT CONFERENCE - ONLINE WORLD

**BODY:**

SUBJECT: Online World holds a "Conference and Expo for Internet Researchers and Managers." Highlights: -- 9 a.m. - Opening Session keynote Address: "Datamining the Internet for Quality," Brewster Kahle, **Alexa Internet** -- 10:45 a.m. - Concurrent sessions: "Practical Searching: The Way We Search Now" "Trends and Technology: Internet Technology Update" "Resource Management: Web-Based Training" "Content Review: Sci-Tech" Roundtable Discussion  
LOCATION: Washington Hilton and Towers, 1919 Connecticut Avenue NW, Washington, DC -- October 12, 1998  
CONTACT: Elizabeth McMahon, 203-761-1466 ext. 524

**LANGUAGE:** ENGLISH

**LOAD-DATE:** October 11, 1998

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**Client ID:** 160

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**Search:** General News; alexa internet

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Tuesday, October 13, 1998

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# LEXIS®-NEXIS® Universe

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Copyright 1998 Associated Press  
AP Online

October 13, 1998; Tuesday 16:10 Eastern Time

**SECTION:** Washington - general news

**LENGTH:** 335 words

**HEADLINE:** Congress Opens Cyberspace Library

**BYLINE:** CARL HARTMAN  
AP-Web-History .0377

**DATELINE:** WASHINGTON

**BODY:**

Four bright red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

Although it's a kind of museum, the library doesn't collect statues. Instead, it collects books the world's biggest collection plus maps, photos, films and rarities like the first printed Bible.

Forty-four tapes lined up alongside the monitors contain the entire contents of the World Wide Web in the months of January and February 1997 two terabytes of material. The sculpture is just for show, a symbol of the library's role as a collector of cyberdata.

Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

Just as the library carefully keeps its first books from Thomas Jefferson's own collection, it is working on plans to hold onto essentials from the Web.

But it can't keep everything. It's trying to figure out what people will need, estimating that the Web now contains 320 million pages and will grow to a billion by the year 2000.

"Every week 1 percent of all Web pages are removed or changed," said Robert Zich, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994 when we first started."

A terabyte of data is roughly equal to 1,000 copies of the Encyclopedia Britannica, said Brewster Kahle, the president of Alexa Internet, which donated the sculpture.

Kahle pointed out that little has been preserved of the first radio and TV programs, and historians would like to have them now.

The monitors in the sculpture show only a sample of what is on the tapes.

By touching the surface of a screen, the viewer can hold the image for five seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash on and disappear.

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The tapes can be seen at <http://www.alexa.com>

**LANGUAGE:** ENGLISH

**LOAD-DATE:** October 13, 1998

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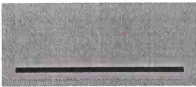
Client ID: 160

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Search: General News; Alexa Internet

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10/13/98- Updated 05:38 PM ET

The Nation's Homepage

## Congress opens cyberspace library

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The tapes can be seen at <http://www.alex.com>.

*By The Associated Press*

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OCTOBER 14, 1998



Bacon's

## 2 terabytes of data displayed at library

### *A sculpture from the Information Age*

By CARL HARTMAN  
*The Associated Press*

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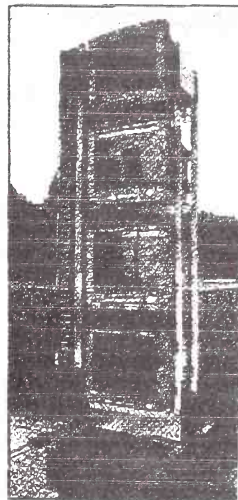
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*The Associated Press*  
A sculpture — featuring four computer monitors bolted together and flashing on screens information too fast to read — was presented to the Library of Congress in Washington, D.C., on Tuesday.

the viewer can hold the image for a few seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the random images flash on and disappear.

The tapes can be seen at <http://www.alexa.com>



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OCTOBER 14, 1998



Bacon's

## Library of Congress shows computer age

■ A monitor sculpture offers a peek at the current world of information.

Washington, D.C. (AP) — Four bright-red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

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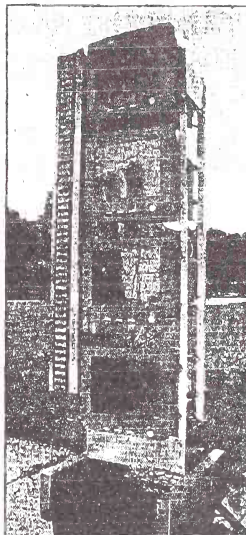
But it can't keep everything. It's trying to figure out what people will need, estimating that the Web now contains 320 million pages and will grow to a billion by 2000.

"Every week 1 percent of all Web pages are removed or changed," said Robert Zach, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994 when we first started."

A terabyte of data is roughly equal to 1,000 copies of the Encyclopedia Britannica, said Brewster Kahle, president of Alexa Internet, which donated the sculpture.

Kahle pointed out that little has been preserved of the first radio and TV programs, and historians would like to have them now.

The monitors in the sculpture



ASSOCIATED PRESS

A sculpture of four monitors sits at the Library of Congress.

### On the Web



The tapes chronicling the World Wide Web's content can be seen at <http://www.alexanet.com>

#### tapes.

By touching the surface of a screen, the viewer can hold the image for 5 seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash





DAILY NEWSPAPER  
**BILLINGS GAZETTE**  
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Circ - (M) 49,719 (S) 56,299

OCTOBER 14, 1998



Bacon's

## Cyberspace sculpture donated by artist to congressional library

WASHINGTON (AP) — Four bright red computer monitors, bolted together and flashing information so fast to read, are the Library of Congress' first piece of sculpture for the computer age.

Though it's a kind of museum, the library doesn't collect statues. Instead, it collects books — the world's biggest collection — plus maps, photos, films and rarities like the first printed Bible.

Forty-four tapes lined up alongside the monitors contain the entire contents of the World Wide Web in the months of January and February 1997 — two terabytes of material. The sculpture is just for show, a symbol of the library's role as a collector of cyberspace.

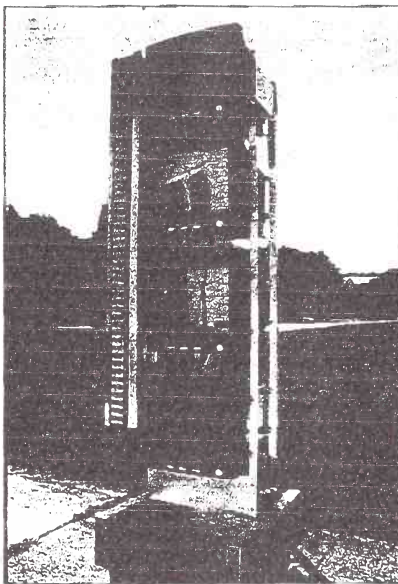
Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

Just as the library carefully keeps its first books from Thomas Jefferson's own collection, it is working on plans to hold onto essentials from the Web.

But it can't keep everything. It's trying to figure out what people will need, estimating that the Web now contains 320 million pages and will grow to a billion by the year 2000.

"Every week, 1 percent of all Web pages are removed or changed," said Robert Zich, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994, when we first started."

A terabyte of data is roughly equal to 1,000 copies of the Encyclopædia Britannica, said Brewster Kahle, the president of Alexa Internet, which donated the sculpture.



Associated Press

**A sculpture featuring four monitors was presented to the Library of Congress Tuesday.**

Kahle pointed out that little has been preserved of the first radio and TV programs, and historians would like to have them now.

The monitors in the sculpture show only a sample of what is on the tapes.



Circ.-M: 67,307 (S) 15,518

OCTOBER 14, 1998



Bacon's

# Library of Congress works to preserve history of Internet

## Sculpture serves as Web symbol

### ASSOCIATED PRESS

WASHINGTON — Four brightly lit computer monitors, tilted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

Although it's a kind of museum, the library doesn't collect statues. Instead, it collects books — the world's greatest collection — plus maps, photos, films and rare artifacts like the first printed Bible.

Forty-four tapes lined up alongside the monitors, on the entire contents of the "World Wide Web" in the months of January and February 1997 — two terabytes of material. The sculpture is to show, a symbol of the library's role as a collector of

cyberdata

Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

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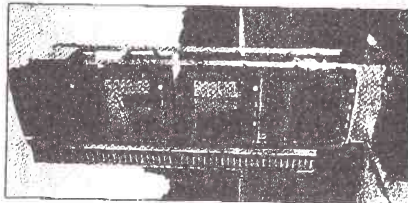
ROBERT ZICH  
DIGITAL LIBRARY PROGRAM  
COORDINATOR

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Kahle pointed out that literature has been preserved of the first radio and TV programs, and historians would like to have them now.

By touching the surface of a screen, the viewer can hold the image for five seconds long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash on and disappear.

The tapes can be seen at <http://www.alexas.com>



**ASSOCIATED PRESS**  
The first piece of sculpture for the computer age was presented to the Congressional Library Tuesday.

## Computer makers think small

LAKE BUENA VISTA Fla. (AP) — The personal computer is about to get far slimmer — and friendlier. Today's bulky desktop machine should shrink to the size of a shoebox within four years, an industry research firm predicts. By 2002, more than one-third of new computers will sport sleek flat-panel displays, which are sharper than most traditional bulky monitors.

Futuristic-looking computers, not to mention sleeker, more powerful ones, will likely result from an ongoing game of technological one-upmanship between rival manufacturers, the Gartner Group Inc. predicted Monday at its annual computer symposium. While computers grow progressively faster and cheaper each year as a matter of

course, the machines themselves have appeared pretty much the same. For most of us, the traditional look — box-like — has consumed our desktop space and even crowded some designers' attempts to make offices warmer and less cluttered.

Advances are pushing down prices of flat-panel screens. That should make it a compelling purchase for many businesses and consumers in just a few years. In addition to saving lots of desk space, flat-panel images, which use liquid crystal, appear crisper and more vivid and reduce eyestrain for computer users.

Smaller and fewer slots for peripherals and devices such as printers, will enable PC makers to shrink the computer box itself.



Circ - (E) 15,999 (S) 23,643

OCTOBER 14, 1998



Bacon's

# Cyberspace sculpture makes debut

WASHINGTON (AP) — Four bright red computer monitors, bolted together and flashing infor-

mation too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

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Forty-four tapes lined up alongside the monitors contain the entire contents of the World Wide Web in the months of January and February 1997 — two terabytes of material. The sculpture is just for show, a symbol of the library's role as a collector of cyberspace.

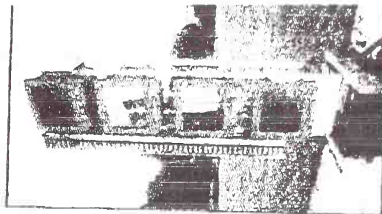
Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

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But it can't keep everything. It's trying to figure out what people will need, estimating that the Web now contains 320 million pages and will grow to a billion by the year 2000.

"Every week 1 percent of all Web pages are removed or changed," said Robert Zach, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994 when we first started."

A terabyte of data is roughly equal to 1,000 copies of this paper.



**CYBERSCULPTURE** — The sculpture was presented to the Congressional Library as the first art piece for the computer age.

conceda Britannica said Brewster Kahle, the president of Alexa-Internet, which donated the sculpture.

Kahle pointed out that little has been preserved of the first radio and TV programs and historians would like to have them now.

The moon. An the sculpture show only a sample of what is or





## SPRINGFIELD NEWS-SUN

Springfield, OH

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OCTOBER 14, 1998



Bacon's

3985-A

## Library working on Web archive

■ Forty-four tapes contain the entire contents of the World Wide Web in January and February 1997

Associated Press

WASHINGTON — Four bright red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

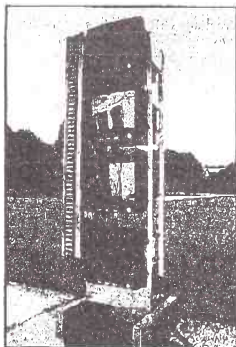
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AP photo

This computer monitor sculpture symbolizes the Library of Congress' role as a collector of cyberdata.

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The tapes can be seen at <http://www.alexia.com>



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## Web shrine at Library of Congress

Entire contents of Web over two months part of exhibit

ASSOCIATED PRESS

WASHINGTON, Oct. 13 — Four bright red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age. The sculpture is just for show, a symbol of the library's role as a collector of cyberdata.

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By touching the surface of a screen, the viewer can hold the image for five seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash on and disappear.

*The tapes can be seen at <http://www.alexa.com>*

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OCTOBER 14, 1998



Bacon's

# Web Sculpted Into Art At Congressional Library

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Forty-four digital tapes lined up alongside the monitors contain the entire con-

tents of the World Wide Web in January and February 1997 — two terabytes of material. The sculpture is just for show, a symbol of the library's role as a collector of cyber-data.

Anyone can see the tapes' content free from the library's public terminals or through the Internet at [www.alexia.com](http://www.alexia.com).

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## WEB KAHUNA

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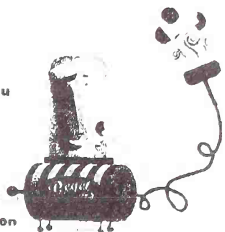
It is, of course, all quite mad. I spend hours downloading files. You too? There must be a better way. And there is! To make those files download faster, first... download these files. They're shareware programs that let you download still more files—only quicker, so you have more time to download even more files. I told you, it's all quite mad!

## I Know Where You Live

☆☆☆ Ever noticed how you can never find a traditional phone number on a Web site? Stands to reason. Businesses don't want you to call. They spend thousands of dollars on multimedia Web sites in the hopes that consumers will find the answers to their questions online and not bother with whiny phone calls. Well, the phonophobes have met their match in Alexa. It's a punty little toolbar that sits for free at the bottom of your screen and spills the secrets of any site you visit. It not only gives you the name and phone number of the company that registered the domain name, it also provides the address and a map to facilitate laser-controlled bombing. Vote if you like a site or not and find out how other Alexa users have voted. And if

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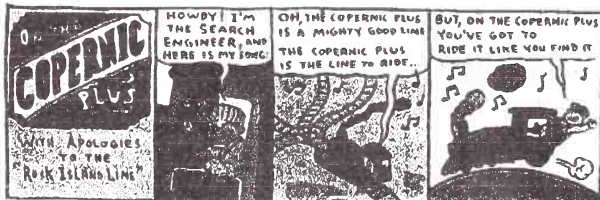
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OCTOBER 1998





UPSIDE

10/15/98

## Gambits

## Sex sells

Text by Tish Williams

**W**hen Rakesh Mathur, CEO of Jungle Corp. slipped into a little black dress for a photo spread on Upside.com, we thought we were just having a little fun at the expense

of Katrina Garnett, CEO of CrossWorlds Software Inc. Apparently sex really does sell, though, because the next week Amazon.com had picked up Jungle for 1.6 million shares of Amazon.com stock—valued at \$187 million at the time of the August deal. Imagine the outcome if Mathur had worn pearls!



Jungle's Rakesh Mathur (above) has decided that acquisitions are a girl's best friend.

## Throw telcos to the wind

Text and photos by Tish Williams

**W**hile harried phone companies are body-slammung legislators and merging like mad, new entrants to the telephony market are all smiles. David House, CEO of Bay Networks Inc.; John Roth, CEO of Northern Telecom Ltd. (which is acquiring Lucent); and Eric Schmidt, CEO of Novell Inc. (brought in for entertainment value), spoke



Roth

at Silicon Valley's Churchill Club in July about life as "Netheads."

House explained the care-free new world of next-generation telcos, such as Level 3 Communications Inc., with its fiber networks and junk-bond financing. Meanwhile, his acquisition

partner, Roth, beamed about the possibilities.

"Nortel has been servicing



House

a business that's been growing at 3 percent a year," Roth said of his RBOC customers. "Now we're underpinning an industry that grows 30 percent to 40 percent a year. That's a lot more fun."

We bet it is ■



Schmidt

## Microsoft, dearest

Text by Tish Williams, photos by Victoria Yee

**J**ennifer Edstrom, daughter of Microsoft Corp. PR chief Pam Edstrom and author of *Barbarians Led by Bill Gates* (Henry Holt & Co., 1998), is engaged in a grassroots PR campaign to get press

columnist Denise Caruso—Edstrom caught the ear of *New York Times* reporter John Markoff. After the pair had exchanged niceties and Edstrom had updated Markoff on her relationship with her mother (and just as everyone was beginning to get comfy), she asked him why the paper hadn't covered her book.

A sheepish Markoff toed the ground as he defended his employer by reminding Edstrom that the paper had indeed reviewed her book. Edstrom refused to back down, however, pressing Markoff to explain why he hadn't personally covered it. Again, Markoff was ready with an answer: Once the book hit the gossip columns, he said, it ceased to be a news story.

"You sound just like my mother," Edstrom said as Markoff shifted his weight to his other foot.

A chip off the old block? I wouldn't say that without ducking.



Upside publisher David Bunnell and Jennifer Edstrom swap Gates stories.

for her controversial book.

At a July dinner hosted by digital jet-setters John Perry Barlow and John Brockman, and Brockman's son, Max, at San Francisco's Hunan Restaurant—and which featured a cast of characters including Daniel Ellsberg of Pentagon Papers fame, Alexa Internet CEO Brewster Kahle and *New York Times* tech



MAGAZINE

## ROLL CALL

Washington DC

Oct - 17, 2005

E - WEEKLY

OCTOBER 15, 1998



Bacon's

## Internet Intelligentistia

Campaign dirt-diggers have cause for celebration.

Alexa Internet, provider of the free Web usage service Alexa, donated two trunks of Web content to the Library of Congress at a ceremony at the Thomas Jefferson Building on Tuesday.

"World Wide Web 1997" is an interactive digital sculpture containing 44 digital tapes next to four computer monitors that flash pages from the 500,000 sites gathered and stored by Alexa Internet. Part of a new trend of preserving America's digital heritage, Alexa

Internet provides a snapshot of what the Web contains at a specific moment. Given that Web sites change constantly and expire, much of the material on the Internet would be lost if not stored in some manner. Alexa Internet donates a copy of the Web on a continual basis to Internet Archive, which stores Web content every two months for academic purposes.

## Barry's Farewell Fundraiser

D.C. Mayor Marwan Barry (D) will throw himself a bon voyage

bash at the MCI Center on Thursday, Oct. 22, at 7:30 p.m. Friends of Marwan Barry, a group of private citizens, is actually organizing the event, but all ticket proceeds left after paying for the \$700,000 event will go to a retirement fund for Barry.

Maya Angelou and Boyz II Men headline the gala, and the Barry group Louis Jerry Butler, Lou Gossett Jr., the Temptations and the BET TV Hip Hop Choir as invited guests. Anyone else who would like to attend can purchase tickets through the MCI Center at (202) 628-3200.

Like a campaign fundraiser, celebrity contact is rationed by do-

matrons, or, in this case, ticket price paid. "Champion" seats are \$25 and "Tribe" tickets are \$50, but a \$99 "Legacy" ticket will buy the bearer entry into a 5:30 p.m. pre-gala reception at the Velocity Grill at the MCI Center.

For more information on the tribune, call (202) 678-2100 or point your Web browser to [www.barrytribune.com](http://www.barrytribune.com).

## Home Court Advantage

After the Bureau of Alcohol, Tobacco and Firearms declined to

take root at the Southeast Federal Center, Sen. John Warner (R-Va.), chairman of the Environment and Public Works subcommittee on transportation and infrastructure, sought to move the agency to Northern Virginia.

Del Eason Holmes, Norton (D-D.C.) pleaded her case last Friday to the House Transportation and Infrastructure Committee for retaining federal jobs in the District, and won — sort of. The committee passed an amendment to keep the agency in either D.C. or "within 2,500 linear feet of an existing metro station in Northern Virginia."

— Stacey Zalt

PHITalk





98S-A  
**Bacon's**

The Register - Grand  
(Ferguson, OR)  
10/18/98

# Library of Congress produces the first cyberspace sculpture

By The Associated Press

WASHINGTON — Four bright red computer monitors, bolted together and flashing information too fast to read, are the Library of Congress' first piece of sculpture for the computer age.

Although it's a kind of museum, the library doesn't collect statues. Instead, it collects books — the world's biggest collection — plus maps, photos, films and rarities like the first printed Bible.

Forty-four tapes lined up alongside the monitors contain the entire contents of the World Wide Web in the months of January and February 1997 — two terabytes of material.

The sculpture is just for show, a symbol of the library's role as a collector of cybertata.

Anyone can see the tapes' content without charge from one of the library's public terminals or through the Internet, said associate librarian Winston Tabb.

Just as the library carefully keeps its first books from Thomas Jefferson's own collection, it is working on plans to hold onto essentials from the Web.

But it can't keep everything. It's

trying to figure out what people will need, estimating that the Web now contains 220 million pages and will grow to a billion by the year 2000.

"Every week, 1 percent of all Web pages are removed or changed," said Robert Zich, coordinator of the library's Digital Library Program. "But some of them are there just as they were in 1994 when we first started."

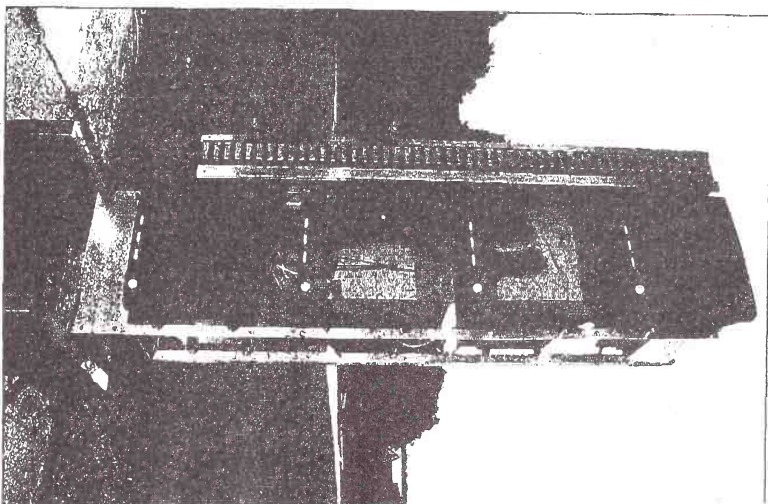
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Kahle pointed out that little has been preserved of the first radio and TV programs, and historians would like to have them now.

The monitors in the sculpture show only a sample of what is on the tapes.

By touching the surface of a screen, the viewer can hold the image for five seconds, long enough to read a bit of what it's about but not long enough to take much of a note. Then the next random images flash on and disappear.

The tapes can be seen at [www.alexacom](http://www.alexacom)



The library features the first piece of sculpture for the computer age

Associated Press





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## BYTES

Monday, October 19, 1998; Page F05

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Internet Guide

### Growth Spurts

Virginia is home to 26 of the 500 fastest-growing private companies in the nation, according to a survey conducted by Inc. Magazine. Only California (83), Texas (44) and Massachusetts (31) had more companies on the list. Virginia edged out New York (24), which finished fifth.

Computers and business service companies were the most heavily represented in the survey, comprising 57 percent of the firms listed, followed by consumer goods and services (12 percent) and telecommunications (7 percent).

QSS Group, a Lanham technology support services company, was the highest-ranked Washington-area company on the list, finishing 11th. McLean technology consultant RS Information Systems finished 41st, Proxicom Inc. of Reston finished 44th and InfoPro of Silver Spring finished 45th.

### Library Building

Virtually speaking, the Library of Congress just added a new wing.

Alexa Internet, a San Francisco-based Web navigation service, has donated two terabytes (2 trillion characters) of "digital materials" to the library in an effort to preserve a slice of Web history. The donation includes scads of Internet content that is displayed in an "interactive digital sculpture," a physical structure containing 44 digital tapes and four computer monitors that library visitors can see.

Titled "World Wide Web 1997: 2 terabytes in 63 inches," the sculpture resembles a bright red British-style telephone booth made out of Etch-a-Sketches. It intermittently displays pages from 500,000 sites that Alexa has archived.

This creates a moment-in-time snapshot of the World Wide Web circa 1997. It is part of the Library of Congress's ongoing "National Digital Library Program," which makes rare American historical documents available on the Internet.

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Q

# Addicted to Advertising

Online ads are popping up everywhere. By Susan Kuchinskas

First, we have to ask, "Would you be interested in finding out more about the new Lexus?" We have to ask because we're now selling demographically targeted, contextual ad placements in *IQ News*. No, no, we're just kidding, we're not doing that ... yet.

Of course, if this were a Web site, it might be different. Bored with banners, jaded by interstitials—and still hungry for cash—Web publishers,

up all over, including *The New York Times'* Web site and Netscape's Netcenter portal. In fact, says Tony Nethercutt, regional sales manager for DoubleClick, San Mateo, Calif., pop-up ads work. "We've found that a pop-up can increase click-through dramatically," he says.

For example, on one entertainment site represented by DoubleClick, a banner did .7 percent click-through, while the pop-up achieved 3 percent. "Same page, basically same creative," he says, explaining with a bit of understatement that, "It's an enhanced creative. It's something that jumps out at you a little bit."

Most innovative ad models are stealthier, beguiling the user into voluntarily downloading the ad-serving mechanism as part of a desired application. Alexa Internet, San Francisco, Calif., was an early player, launching its free navigational service in July of 1997. It's a tool bar with an ad window that starts up when a browser is launched, and, like a pushy party guest, lingers after the browser is closed, serving cached ads until you click it shut. Alexa pays for eyeball time by giving the user information about each site visited including "What's Related?," a list of the top 10 sites other registered Alexa users visited next.

One of Alexa's key sales points is that the company can place ads concurrent with sites that do not include advertising, such as government or academic sites. In effect, this allows the company to serve ads to formerly ad-free environments, though this only happens when the Alexa toolbar is on.

In August of this year, Alexa inked a deal with Netscape, Mountain View, Calif., to provide its What's Related? service for Netcenter Smart Browsing, a set of enhanced features for the Netscape 4.5 browser. In this case, the top two items on the list are paid placements. They're separated from the true Alexa links by a tasteful



like Manhattan real estate moguls selling the air rights above their buildings, are looking for new kinds of real estate. True to form, a gaggle of spunky technology companies are enabling the industry's ad addiction.

In mid-1997, pop-up ads began, well, popping up, obscuring the screen until the (often-frustrated) Web site visitor clicked the window closed. GeoCities came under fire from members for placing them on members' free homepages, though the intrusion could be avoided by paying \$4.95 per month. After initial complaint, the public seems to have thrown up its mouse-hands, because pop-ups are now springing



gray line.

On October 5 at Fall Internet World in New York, New York-based Robocast introduced an automated Net surfer called Roboplayer. The free application lets users create a bookmark-like list of links which is displayed on a special window adjacent to the browser window. On the top is a small banner ad. The product benefit is that the app will automatically sequence through the links in any order and at any speed set by the user. It's like watching a slide show where the user can stop, pause, rewind and skip.

The catch is, every fifth screen is an ad instead of a Web page. Yes, these ads can be as interactive as any other. And, advertisers will no doubt be happy the Roboplayer client application tracks the entire session and reports the user's activities back to the Robocast server.

Say you typed a keyword into a search engine and got back a results screen with 10 links. You could pull this list of links into the Roboplayer so that you could skim them as they played automatically instead of clicking one, reviewing the site, hitting the back button, clicking the next, etc. If you did this, you'd be trying to ignore ads served by Robocaster instead of those that would have been served by the search engine.

Yes, says Robocast CEO Damon Torres, in such a case his service would be indeed pulling eyeballs away from the search service. Possibly because he's a nice guy, possibly because he doesn't want to start a war, Torres says he wants to do deals with search engines to serve those ads for them. "We wrung our hands about that," he says, "to find a solution which might

be symbiotic."

Torres says that his company's full-page rich media ads can make up in quality what search engines would lose in quantity. To prove his sin-

cerity, he's hired Kirk Woerner, former vice president of technology for ad network 24/7 Media, New York, as vice president of ad technology to make sure Robocast delivers.

The technology is also being sold as Robocaster to publishers who want to automate navigation through their sites. American Express Publishing Corporation, New York, has signed on to introduce Robocast-enabled versions of Travel & Leisure and Food & Wine, with a co-branded, downloadable Roboplayer. Nissan Motor Corp./Infiniti USA division, Gardena, Calif., and Crystal Cruises, Los Angeles, Calif., have developed rich media ads especially for the publications.

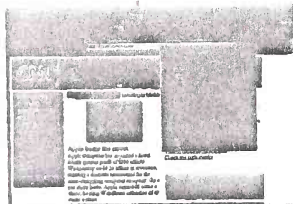
Also at Internet World, CyDoor Technologies, Tel Aviv, Israel, made the U.S. introduction of an application to sell ads on software that accesses the Internet. The company demonstrated the program running on Disconnect, a product from PixieSoft, Bney-Braik, Israel, which automatically closes the Internet connection so that users don't have to wait by the computer for long downloads to finish. Software developers who sign up with CyDoor receive a small monthly payment for every user. CyDoor sells and serves the ads, target-

ing them through IP address analysis, user profiles and analysis of the clickstream. When the user activates the program, ads are downloaded in the background and cached to run simultaneously with the program as long as it's open.

But it remains an open question as to whether the public will accept ever more encroaching ads. Says Doug Hansen, director of sales for Alexa Internet, the companies who offer the right things to users will succeed. "I think the ones that survive will be those which provide useful, relevant information or tools," he says. "If they're not related to what you're doing on the Internet, they distract from, rather than add to your experience."

When you think about all this new online ad real estate up for grabs, doesn't it make you want to enjoy a nice cold Coca-Cola? ■

Alexa's gray  
"What's Related?"  
box lists sites  
which pay for  
placement first.



## DIGITAL FLUB

## Irish Eyes Aren't Smiling

Motorists in Dublin sat through horrendous backups during a Monday morning rush hour last month after traffic lights at 140 intersections were accidentally disconnected from a computerized control system, the Irish Times newspaper reported.

Effectively put on autopilot, traffic lights at major arteries into the city center flashed red and green based on predetermined sequences that took no account of traffic volume.

The Sept. 28 failure occurred as technicians were working to switch city traffic lights over from an older control system to a new one. Tie-ups continued as lights were reconnected to central control.

## BYTES

## Growth spurts

Virginia is home to 26 of the 500 fastest-growing private companies in the nation, according to a survey conducted by Inc. Magazine. Only California (83), Texas (44) and Massachusetts (31) had more companies on the list. Virginia edged out New York (24), which finished fifth.

Computers and business service companies were the most heavily represented in the survey, comprising 57 percent of the firms listed, followed by consumer goods and services (12 percent) and telecommunications (7 percent).

QSS Group, a Lanham technology support services company, was the highest-ranked Washington-area company on the list, finishing 11th. McLan technology consultant RS Information Systems finished 41st. Proxcom Inc. of Silver Spring finished 45th.

## Library Building

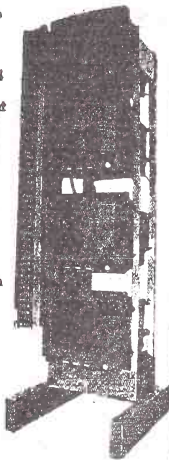
Virtually speaking, the Library of Congress just added a new wing.

Alexa Internet, a San Francisco-based Web navigation service, has donated two terabytes (2 trillion characters) of digital materials to the library in an effort to preserve a slice of Web history. The donation includes scads of Internet content that is displayed in an

"interactive digital sculpture," a physical structure containing 44 digital tapes and four computer monitors that library visitors can see.

Titled "World Wide Web 1997: 2 terabytes in 83 inches," the sculpture resembles a bright red Brille-style telephone booth made out of Etch-a-Sketches. It intermittently displays pages from 500,000 sites that Alexa has archived.

This creates a moment-in-time snapshot of the World Wide Web circa 1997. It is part of the Library of Congress's ongoing "National Digital Library Program," which makes rare American historical documents available on



The Washington Post

10/19/98



## TAKES

# The Search Search Goes On

BY DON BARKER

**T**he Internet has become so large and disorganized that finding anything is often a matter of luck. More than 320 million pages exist on the Web. That number will double over the next six to 12 months. Even the most powerful search engines only cover a third of those pages, as Mark Frauenfelder points out in "The Future of Search Engines" (Sept. 28).

Frauenfelder describes three tools that can help navigate this massive information overload—Google, Direct Hit and Clever. Such search systems measure the popularity of Web pages to determine those likely to contain information relevant to your search. Netscape also plans to include a similar service called What's Related (from Alexa) in Communicator 4.5.

Although popularity-based systems may provide useful links, they fail to deliver comprehensive results. What's worse, they don't attempt to solve another growing problem—the trend of putting the most valuable information on the Net into databases. Because search engines crawl the Web, the content in a database is not indexed and, thus, is not available for searches.

Popularity-oriented search systems offer no guidance for Web shoppers. E-commerce has become a billion-dollar industry, but according to Zona Research, many Web shoppers can't locate a specific product. In fact, Zona's study says that 62 percent of Web shoppers gave up looking for items online.

To overcome the inadequacies of individual search engines, 77 percent of users use more than one search engine to locate information, according to NPD Online Research. This makes sense: Combining search engines can increase coverage by as much as three and a half times. Metasearch tools,



or bots, make it possible to simultaneously query multiple search engines from a single interface, which explains why so many are suddenly appearing on the scene.

Products like BullsEye from IntelliSeek take the metasearch process a step further by using intelligent agents to query databases on the Net that are not indexed by search engines. These intelligent agents provide information that would normally require time-consuming visits to each database site. This new breed of search tool also gives you enhanced query and analysis capabilities.

For instance, Mata Hari 1.10 from WebTools supports a full range of Boolean operators for composing structured search statements that elicit the proper information. These smart metasearch programs come with statistical analysis tools to help you quickly identify the most useful information.

Analytical techniques range from the simple scoring of multiengine search results based on keyword relevance to the sophisticated grouping of results by hidden concepts and similarities. BullsEye Pro includes a tracking system that auto-

matically detects updates on the Net and alerts you.

Other metasearch tools include WebFerret Pro from FerretSoft and Copernic 98plus from Agents Technologies. Like BullsEye and Mata Hari, they support simultaneous querying of multiple search engines using Boolean expressions.

Despite improvements, searching is still a daunting task. The lack of a uniform data structure makes it impossible for search engines to properly index data, which cripples the performance of even the smartest metasearch tools. Yet there's hope in sight.

The W3C (World Wide Web

Consortium) recently endorsed a new universal data structure called XML (Extensible Markup Language). XML separates data from browser display information and organizes it into tree-like hierarchies. These hierarchical files use custom tags to identify data and make it easy to correctly index content.

XML has already gained critical support. Microsoft and Netscape have promised XML compliance with their next browser releases, and Web toolmakers are rushing to introduce XML development tools. Nonetheless, widespread adoption of this format will take time, as Web site developers learn to implement it.

In the meantime, the growth and complexity of the Web will continue to overwhelm search engines. Advances in smart metasearch tools and intelligent agents will, no doubt, improve your odds of finding the information you want; however, you'll have to wait until a structured data standard, like XML, is widely adopted before searching becomes simple, fast and accurate. ■

*Don Barker is senior editor at PC AI Magazine and a columnist for BotSpot. You can reach him at don@donbarker.com.*

ILLUSTRATION: MARBLE HEART FOR THE INDUSTRY STANDARD





## INTERNET WORLD

New York, NY

Oct - \$6.97

Weekly

OCTOBER 19, 1998



Bacon's

# REPLY TO ALL/An Unfortunate Time To Be 'Deconstructed'

If *Seasave* Internet World decided to be constant on Web site at the same time we were researching it, I'm guessing the pool (Oct 3) judge 781. Our new site, released on Sept 30, allows our customers to shop within their Web browsers or download our Windows 3.11-based thin client software.

One of our best-selling writers, Louis Blassfeld, raises the possibility that a better-designed competition could "overwhelm" his. This may be true, but having an online crime movie company involves a lot more than great Web design. In any case, it includes (1) electronic connections to five major grocery chains, allowing shoppers to view the exact price as it appears in the store; and (2) delivery and tracking systems that get orders to your door within a two-hour window.

The Web design is the last of many bigger hurdles in a race that involves larger operational issues than technical ones.

Eric V. N. Brown  
Senior Technologist  
Perceptics  
demb@perceptics.com

## A Question of Netiquette

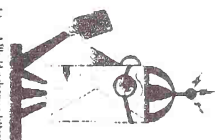
When reporter Sarah L. Roberts-Mull failed to mention in her Oct. 3 description of Alexa Internet's Alexa Bot that it had queried the Internet's "Botnets Companion," page 431 is that some Web sites have discovered Alexa not following the robots exclusion standard.

We reported such a problem directly to Alexa's technical support contact addresses (as listed on their Web site) more than a month ago and never heard a single word back.

We discovered an Alexa robot crawling our site at a decidedly insatiable rate (more than 70 page requests per second) during prime time hours, and crawling arcs of our site (such as our cgi-bin directory) where our robots.txt file prohibits such crawling. Their robot's crawling brought our site to a near standstill, yet when we informed them of this, all we got in return was silence. We have since banned their robot, redirecting their requests back to Alexa.com.

I'm all for new services such as Alexa, but they need to understand that by abusing Web technologies in the manner we have witnessed, they will only alienate the very sites they are trying to help.

Dr. John Glickson  
Director and Webmaster  
Mental Health Net  
jglick@cmhc.com



Heard that address that to the other I and all others come to believe care and include "tell to the floor" in the message's subject line.

**AOL is a Lame Example of Automated E-mail Support!**  
Your article about the growing need to respond to customer service inquiries that come in via e-mail contains a reference to America Online's way of handling this function, which as you note, includes "trained responders" ("Companies Seek Solutions to E-mail Flood," Oct. 5 Web Development article).

In my experience, AOL's trained responders never really answer a customer's question. Here's what makes me think this:

I use AOL at home (and a retail ISP at work). On occasion I've had to send in technical questions to AOL's tech support.

No matter what I ask, I get a canned response that generally doesn't answer my question. (I deal with end-user support all day at work so I like to think I can articulate a clear question.) The only way I ever get a response is to resend AOL's original response back with a restatement of the question, and say "You never answered my question."

Of course, that starts the whole process all over again—until I give up.

Sep? Maybe that's what AOL is really trying to accomplish.

Jim Shorewe  
Network Administrator  
jshorewe@aol.com





Federal Computer Week

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**THE DEPUTY DUO.** The Internal Revenue Service this month picked up two new high-level managers it hopes will help the agency carry out its reinvention mandate: deputy commissioner of operations Bob Wenzel and deputy commissioner of modernization John LaFaver.

Wenzel, a former chief operations officer at the IRS, co-chaired a task force that prepared a recent report on reinventing customer service.

LaFaver was secretary of revenue in Kansas, where he created a customer-oriented organizational culture that used state-of-the-art technology to deliver rapid and accurate service to taxpayers. LaFaver also has held the position of revenue commissioner in Maine and Montana.

**EC DOES IT.** And at the Commerce Department, Secretary William Daley appointed Elliot Maxwell as his new special adviser for electronic commerce.

Maxwell will advise the secretary on how best to fulfill the White House's strategy to increase the use of EC to do business in the so-called emerging digital economy.

In what will be no small task, the White House charged Commerce last year with fostering the use of EC and overseeing seven of 13 EC policy initiatives. Maxwell was previously deputy chief of the Federal Communications Commission's Office of Plans and Policy.

**MICRON MUSCLES.** Micron Federal is beefing up its outside sales team to compete with the more than 40 pavement pounders that Dell has working the federal agencies. Harry Heisler, the head of federal business for Micron, has picked Tony Colangelo, most recently of Nexar, to direct the growing federal outside sales team.



Mail questions to [webmaster@fcw.com](mailto:webmaster@fcw.com)

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## Federal Computer Week

OCTOBER 19, 1998

## Intercepts

By FCW Staff

**THINKING MACHINES.** The Defense Information Systems Agency does not fare especially well in the General Accounting Office's recent report on multiple-award contracts.

Through fiscal 1997, according to GAO, DISA received only one bid for about 44 percent of the task orders placed against its vehicles. Nothing new here. Vendors have complained before that DEIS I and II task orders, for example, tended to gravitate toward incumbent contractors, discouraging potential challengers from going through the effort of submitting a bid.

But the situation may not get any better. GAO reports that DISA has no plans to make it a policy to notify contractors about potential opportunities. Furthermore, DISA apparently has decided that program officials may rely exclusively on an analytic tool to select contractors, based on information about past performance, cost and other data. Talk about high-tech contracting. Some vendors may wish DISA also had instant replay.

**DIGITAL OVERLOAD.** The Library of Congress last week unveiled a gift that is designed to provide library users with a complete snapshot of the World Wide Web. The gift, a digital sculpture rendered by Alan Rath and presented by the Alexa Internet Web navigation service, contains every page that went live on the Web during January and February last year, all being stored in a 2-terabyte database. The images are plucked randomly from the database and flashed on the tall bank of four computer monitors stacked one on top of the other.

For those who must know, yes, the artist captured all images, including those that appeared on pornographic Web pages. But at one image per second, those with prurient interests might want to just stick to the Starr report

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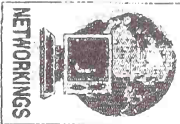
Myel Tribune  
(Maford, OR)  
10/4/98

# Alexa: next-step search engine

By MARGOT WILLIAMS  
The Washington Post

The Internet's vast resources are often compared with a library with all the books dumped on the floor. That's not a pretty picture. But when search engines fail by retrieving too much information to handle, the analogy feels close to the truth.

Alexa ([www.alexa.com](http://www.alexa.com)), named for the great library of Alexandria, Egypt, that was destroyed by fire in the third



NETWORKINGS

century, is a unique effort to both preserve the body of information contained in the Internet where countless pages are scrapped every day, and to provide intelligent assistance in navigating its random paths.

During the past six months, an Alexa toolbar, residing at the bottom of my browser, has been feeding me site stats — data about each site I visit — and offering recommendations on other sites that I might try for related information.

Suppose you go to the Dead People Server, a site that has exhaustive information about those no longer with us, organized alphabetically ([www.dty-rei.com/~lmanicaps](http://www.dty-rei.com/~lmanicaps)). When I'm there, Alexa shows me other sites like Find-a-Grave, the Political Graveyard Biography, We'll Always Remember the home page for dead rock stars) and, of course, Dead Elvis's Page.

Moving on to Biography.com, I

## Places to go on the Web

As Halloween comes near, and the Internet grows in ghouls, these ghoulie gothic sites are a little bit spooky:

- Dead People Server: [www.dty-rei.com/~lmanicaps](http://www.dty-rei.com/~lmanicaps)
- Find-a-Grave: [www.findagrave.com](http://www.findagrave.com)
- Political Graveyard: [www.politicalgraveyard.com](http://www.politicalgraveyard.com)
- Biography.com: [www.biography.com](http://www.biography.com)
- We'll Always Remember: [www.willalwaysremember.com](http://www.willalwaysremember.com)
- We'll Always Remember: [www.willalwaysremember.com](http://www.willalwaysremember.com)
- Dead Elvis's Page: [www.deadelvis.com](http://www.deadelvis.com)
- Grindhouse Project: [www.grindhouseproject.com](http://www.grindhouseproject.com)
- Dead Elvis's Page: [www.deadelvis.com](http://www.deadelvis.com)

can click on another button to find out who owns this site (the Biography Channel) with address, phone contact number, the domain's registration date and other information — like how the site ranks in terms of Web visitors, its speed, freshness, number of pages and how many other sites link to it. If available, there are also site reviews and the collaborative ratings of Alexa users.

And yes, there's an ad, a very small ad, that changes as I move to a new site.

There's also a mysterious button that temporarily grayed out, but will be made active again in October. When this archive function returns after some reconstruction, Alexa will allow you to retrieve dead Web pages — ones that used to be there but now yield a "404 Not Found" message when you ask for them.

Alexa puts off this miracle by dipping into its 12 trillion-byte archive, which contains copies of Web pages that it's been collecting since early 1996. It's been taken off line for work because the archive just got too plain big to serve back

quickly. I confess that I am hooked on Alexa. But what is it? Not exactly a search engine, not really a Web site directory.

"The term that seems to be sticking is surf engine," said Brewster Kahle, chief executive of Alexa Internet, which has its headquarters in the Presidio in San Francisco. Kahle also founded the nonprofit Internet Archive of the Web to record the history of cyberspace in 1996. "It's an Internet assistant, like having a really smart friend with you."

Trend watchers take note: Wired magazine's September issue deemed surf engines "wired" and portals "tired." Portal sites try to hold your attention and keep you, while Alexa travels out on the Web with you and guides your path.

Surfing with Alexa gives consumers and business people information that helps them make "information trust decisions," according to Kahle. For each of the 1 million Web hosts documented and ranked in popularity by Alexa, information on who's behind it and where it's located is collected from official domain name registration

information. Site reviews and ratings come from Alexa partners such as Yahoo! Internet Life and Recreational Software Advisory Council.

But the collective intelligence behind the related links feature that make Alexa unique comes from users like me and you. When activated next to our browsers, Alexa anonymously tracks the decisions that we make about what's worthwhile or worthless, analyzing our clicking on or clicking away from pages on the Web.

It calculates the paths that we choose and the time that we spend visiting. Then the information is used in aggregate to help inform future users. It could be called a recommendation engine. Overall Web traffic patterns link structure and the content of Web pages lie in to the compilation of related links.

The usage paths are separate from information that could identify an individual. Alexa says follows a privacy policy ensuring that any information from an individual will not be provided to third party.

The other nice thing about Alexa you don't have to buy it. The newest version of Netscape Communicator (4.5) has the Alexa links feature embedded as its "What's Related" component of Smart Browsing. Internet Explorer 4 has a version of the full Alexa service that can be installed in it less than a minute.

Netscape Navigator 3? Communicator 4 or Internet Explorer 3 running on Windows or NT 4.0.

Margot Williams' e-mail address: [williams@washingtonpost.com](mailto:williams@washingtonpost.com)



## ADVERTISING AGE

New York, NY

Oct. - \$5,315

Wireless

SEPTEMBER 26, 1998



Bacon's

Ziff-Davis renames  
McBryer site

Ziff Davis' newly formed E-Commerce Group today changes the name and URL of its 2-year-old Computer Shopper Network site to Computer Shopper ([www.computershopper.com](http://www.computershopper.com)), ensuring a single identity to the Computer Shopper line of products, which include a magazine, buying guide, a Web site and a TV show.

Career Central adds  
marketing category

Career Central Corp. ([www.careercentral.com](http://www.careercentral.com)) is expanding its Web category specialties this week with Career Central for Marketing to complement its Career Central for MBAs and Career Central for Developers.

The new category will target marketing, product management, advertising, public relations, marketing, communications, database marketing, direct marketing,

brand management and market research. The service is free for users and costs \$2,995 for companies searching with a guarantee of at least five qualified and interested candidates.

Alexa links deal  
with InsWeb

Alexa Internet announces today an advertising agreement with online insurance company InsWeb. Alexa ([www.alexa.com](http://www.alexa.com)) creates a browser plug-in. The

Alexa tool bar or icon stays with users as they surf the Web, providing them with site statistics and related links on sites that typically don't carry advertising. Terms of the deal were not disclosed.

Dell teams with AT&T,  
Exite for Web access

Dell Computer Corp. is teaming with AT&T Corp., Exite and SBC Communications on Internet services for new Dell PCs.

## bulletin board

With its new Dell ConnectDirect program, Dell will bundle Internet services from AT&T WorldNet connecting to an Exite customer home page ([dell.exite.com](http://dell.exite.com)). Dell and SBC will offer high-speed access over regular phone lines using special ADSL modems under a joint marketing agreement starting early next year.

ZDTV features Web ads on  
TV show

ZDTV, an affiliate of Ziff-Davis, will demonstrate online ads from online computer store Egghead.com. Every episode of ZDTV's daily TV program "Internet Tonight" will feature parts of the Egghead.com site with hardware or software promotions.

In related news, ZDTV signed an advertising deal with Web auction retail site Onsale. Onsale's ads will feature live online auctions during ZDTV's "Money Machine" TV program, a show about how to manage personal fi-

nances using the Internet. Lori, San Francisco, created the interactive ads for Onsale.

Purple Moon  
sets up shop online

Girls site Purple Moon ([www.purple-moon.com](http://www.purple-moon.com)) last week opened the Purple Moon Store, an online store selling merchandise aimed at preteen girls. Based on the Purple Moon site and adventure series of CD-ROMs, the merchandise includes clothing, watches designed and produced by Fossil, and Day Runner planners.

Purple Moon is also calling to art suppliers, fashion retailers and other companies to broaden its store offerings and create products customized to the characters in the Purple Moon stories.

Netscape expands area  
for women in business

Netscape Communications Corp. boosted its Netcenter

Small Business Channel by adding services and content from Vitrin, a developer of search and transaction engines and women's site Women.com. Netscape's ShareShip by Vitrin, is a companion tool to help users reduce shipping costs. HerBusiness is a new Netcenter area with Women.com content.

## In other news

Infusate Corp. and Walt Disney Co. will introduce a portal called Go Network ([www.go.com](http://www.go.com)). The site will use Infusate's searching capabilities, and draw content from Disney, ABC News and ESPN.com. Sandpaper Networks, Westlake Village, Calif., today launches Footprint, an outsourcing service that helps Web publishers distribute content over the Internet.

## HOW TO REACH US

Kate Hader, editor (kader@crn.com), Pat Rinden, deputy editor (prinden@crn.com), Matt Cramer, associate editor (mattc@crn.com).



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SEPTEMBER 28, 1998



Bacon's

## Insurance Firm Eyes Toolbar Ads

Illustrating again that every chunk of Web real estate is potential ad space, InsWeb, San Mateo, Calif., has signed with San Francisco-based Alexa Internet to advertise on the "What's Related" feature of the Netscape 4.5 browser and on the user's toolbar. For the campaign, which began over the weekend, Alexa will serve InsWeb ads within its toolbar when users visit an automobile or auto insurance-oriented site. As part of the deal, InsWeb is guaranteed a link as one of the top two choices listed in the toolbar when users click on Netscape's What's Related button.

Alexa is a free, downloadable tool providing ancillary information about Web sites via proprietary software. Alexa also serves ads within a box on its toolbar. Site information provided in the toolbar includes to whom the site is registered, how many visits it's received and a What's Related feature specifying the top 10 sites users visit afterwards. At the top of that list are two paid placements from advertisers that are separated from the remaining eight listings by a tasteful gray line. Both the toolbar ads and What's Related links can be targeted to Web users.

In an agreement signed last June with Netscape, Mountain View, Calif., Alexa Internet—a company founded by technology pioneer Brewster Kahle—provides the software for a similar "What's Related" feature, which is integrated directly into the 4.5 browser.

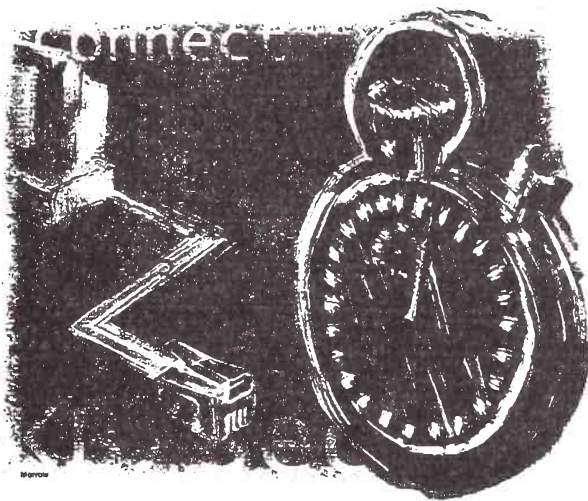
Terms of the InsWeb deal were not disclosed. An Alexa Internet spokesperson said that at peak times Alexa was serving as many as 34 ad impressions per second. The campaign will run at least through year's end. Other What's Related advertisers include CBS MarketWatch, HouseNet and First Auction. —Susan Kuchonskas //







# Shorten Your 'Net Commute



**F**eel a need for online speed? Who doesn't? With conventional modems reaching their limits and other options such as cable modems and digital phone lines still out of most users' price ranges or service areas, a bumper crop of software utilities has cropped up.

The software developers all have the goal of helping you make the most of your browser and Internet connection. Some packages tweak your dial-up settings for a speed boost while others reorganize your World Wide Web browser's cache to make browsing a bit faster. Regardless of their approach, they're all designed to offer scenarios you can no longer buy with new hardware if you already have the fastest modem available—a 56 kilobits per second (Kbps) unit.

We'll review programs that speed up your Web browsing experience plus look at some

ways you can improve Web use and Internet connections without buying software.

## ■ Make The Most Of A Modem.

Checkit NetOptimizer from TouchStone Software promises to increase your modem's throughput. It does nothing to the speed of the modem, so don't think of it as a modem upgrade. It tweaks your computer's port settings and Transmission Control Protocol/Internet Protocol settings to make the most of your modem, regardless of its speed. (TCP/IP represents two protocols that together dictate how packets of information are sent over networks and ensure the reliability of data transmission across Internet-connected networks.) The modem will still connect at the same speed, but that connection's data transfer will be faster. For example, when you download files from the Internet, you'll see the speed at which they're

being downloaded—generally in the form "14 KB/sec." That 14 kilobytes per second (KBps), which NetOptimizer works to improve. TouchStone advertises rather spectacular increases. In a best-case scenario, it says you could get up to a 100% speed increase. We tried the software on several computers with different modems and Internet service providers (ISPs). In many cases there was little or no speed increase, but in a few instances we found impressive increases, such as 41% in one case and 64% in another. Still, they're a long way from the advertised speed boosts.

The problem is that your computer may already be using the optimum settings. If so, there's really nothing NetOptimizer can do to improve your connection. To tell whether the software would help your connection, watch your throughput speeds the next time you download a large file from the 'Net. If you have a 28.8Kbps modem, you should have a transfer rate of at least 2KBps, preferably around 2.5KBps. With a 33.6Kbps modem, expect throughput rates near 3KBps. With a 56Kbps modem, throughput rates should be at least 3.5KBps, preferably 4KBps. If your rates are significantly slower, NetOptimizer will be a handy product for you.

The utility works by changing settings that users rarely change on their own unless they know a lot about the TCP/IP and how to set their computers' communication port (COM port) settings. NetOptimizer is a great program that takes the guesswork and gruntwork out of changing those settings and actually tries several variations of settings until it finds the one fastest for your computer and modem.

■ **Cache It.** Both major browsers, Microsoft Internet Explorer and Netscape Navigator, increase download speeds by caching Web pages. Each time you open a Web page, a copy is saved in the browser's cache on your hard drive. Then, if you enter that Web page's address again (or click a link to reach that page), the browser checks whether it has a copy of it in the cache. If it does, it will quickly check to see whether the page online is the same as the one in the cache. If they match up, instead of downloading the whole page off the 'Net, the browser will open the copy in the cache. You see a speed increase because loading a page from your computer's hard drive is much faster than downloading it from the Web.

For example, if you open a Web site, click a link and then click the Back button to return to that Web site, neither Navigator nor Internet Explorer will redownload the page. Instead, you will see the copy opened from the cache.

This brings up the difference between the two types of caches. Navigator uses both a memory cache and a disk cache. The memory cache is the smallest, but also the fastest, and uses the computer's random-access memory (RAM). Typically, this cache takes about one megabyte (MB) of memory, enough to hold a few Web pages, pictures, and Java applets. The more extensive, but slower, disk cache is used to store pages displaced from the RAM cache as more recently viewed pages are added.

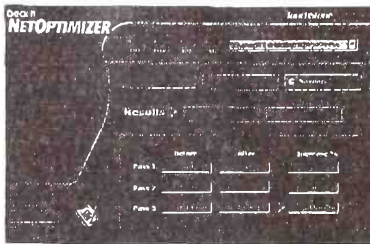
The default settings in Navigator are relatively low: 1MB of memory cache and 5MB of disk cache. If you have plenty of memory, try tripping the memory cache to 2MB or 3MB. Likewise, if you have a big enough hard drive, try tripping the disk cache to 10MB, 15MB, or 20MB. If you're really adventurous you can try tripping it further. The boost really depends on the speed of your computer, modem, and hard drive. If you have a slow computer and a slow or nearly full hard drive, a large cache probably won't help much and it will take the browser longer to quit. The larger the cache, the more maintenance required and the longer the wait.

Another way to improve cache performance is to have the cache check files only once per session. If Every Time in Navigator or Every Visit To The Page in Internet Explorer are checked, the browser will check the Web for changes every time you look at a Web page, even if you just saw it two minutes ago. All that extra double-checking can significantly slow you down. To fix this in the latest version of Navigator, *e.g.*, go to the Edit menu and select Preferences to change your cache settings. Click the plus symbol to the left of Advanced and then click Cache. In Internet Explorer 4.0, go to the View menu and then Internet Options. Click the General tab, then under the Temporary Internet Files options, click Settings.

With Navigator and Internet Explorer, changing the cache settings can produce minor speed improvements, but they won't be as good as those you'd see with Web caching utilities such as Connectix's Surf Express.

### ■ No-Brain Caching.

that makes changing the cache settings simple and speeds up Web surfing: Connectix's Surf Express. It speeds performance by noticing



**NetOptimizer tweaks your Transmission Control Protocol/Internet Protocol (TCP/IP) and communications port settings to allow your computer, modem, and Internet service provider to communicate faster.**

what pages you regularly visit and downloading updated copies of the pages to the cache ahead of time. It also creates its own cache and organizes it for optimum speed. Having one cache means that if you have both Internet Explorer and Navigator on the same system, they can share a cache, reducing duplication and increasing speed.

The software works best for pages you visit often, such as those you have bookmarked or put in your Favorites menu. We couldn't verify Connectix's claims of Web pages loading 36 times faster with SurfExpress than without, but even so, we did notice a respectable increase in speed when loading previously viewed Web pages. Users should realize, though, that this software is designed to speed loading of previously viewed Web pages, which are already in the cache, not sites you've never visited before.

Surf Express offers a few tricks in addition to boosting the browser's speed. Double-clicking the program's icon in the system tray (in the bottom-right corner of the screen) lets you see what kind of performance you're getting, how quickly pages are loading, and what percentage of pages you are looking at from your cache, as opposed to from the network.

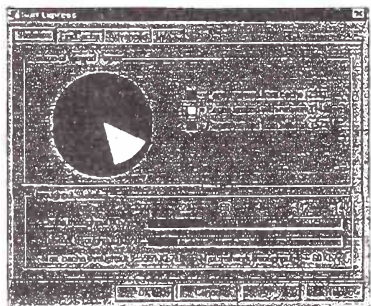
The more pages you're getting from your cache, the better your speed.

Even handier is the Surf Express option that lets you search your cache. So, before connecting to the 'Net and searching for something, you can save yourself the call by checking the cache first.

## ☞ That's A Keeper!

**☛ That's A Keeper!** Anyone who has made a presentation featuring Web pages probably knows the perils. You could show up at the conference only to find there's no place to plug in your modem and thus no way to get on the 'Net. Or, the page you need to show everyone is suddenly unavailable. ISP problems. Phone difficulties. It doesn't take a vivid imagination to picture a plethora of things that could go wrong. Several software companies have put their imaginations to use coming up with offline browsers that simplify presentations heavy in Web pages by letting you capture the pages to your hard drive—images and all.

The software is invaluable for presentations, but is handy for researchers, as well. Because Web pages are constantly being changed, renamed, or moved among servers, a bookmarked document could be gone within a few



**SurfExpress speeds your World Wide Web browser by caching and pre-downloading your most commonly visited Web sites.**

88 Smart Computing / October 1998

months. Instead of crossing your fingers and bookmarking it or saving a text copy, you can capture the whole page. Now that graphics-laden report you need to write your next masterpiece can be safely stored on your hard drive, not MIA on the Web.

The better utilities let you schedule downloads so that your favorite Web page will be waiting on your hard drive when you sit down at the PC. That means no more waiting for those graphics to load when you're reading the page.

Among the host of offline browsers, some, such as *Net Attaché*, are much more complex than others. We tried three of the offline browsers that are simple, yet functional, providing the most bang for the buck.

The first of the three packages we reviewed is Math Strategies' *CatchTheWeb*. The program lets you capture entire Web pages to the hard drive and organize them into a presentation. The software works great, but it only works with Internet Explorer and does not support Java or links inside the presentations themselves. In terms of Java, it means that you won't see Java applets (the programs that run things such as clocks and news/sports/stock tickers from inside a Web page) in the presentation, just a gray spot where they should be. Unless you're doing a

presentation on Java applets themselves, this shouldn't be a big deal, since the applets are usually just a small part of the entire page. Link support is also lacking. You can capture the top page of a Web site as well as several sub-pages. But if you click a link to one of the captured sub-pages in *CatchTheWeb*, the program will try to download the page from the Web, even if it has a copy within the presentation. In other words, the only way to move among pages is to use the back and forward buttons to move to the next page in the presentation. Still, shortcomings aside, it definitely beats the alternative of praying you'll be able to load Web pages when you're standing before an audience.

*SurfSaver* from askSam Software offers the same functions and uses as *CatchTheWeb*, but with fewer drawbacks. It doesn't support links within presentations, but it does support Java and it's easier to use. *CatchTheWeb* requires you to run two programs at once: Internet Explorer and *CatchTheWeb*. Organizing a presentation can mean a lot of switching from one program to another. With *SurfSaver*, everything is handled inside Internet Explorer or Navigator. It's a big step up from *CatchTheWeb*, which only supports Internet Explorer, but it's not the best of the bunch.

That distinction belongs to *DataViz's WebBuddy*. It also supports Navigator and Internet Explorer and, while its Java support is sporadic, it does let you follow links within presentations. But that's not all; *WebBuddy* has other features the other two lack, making it a productivity tool as well as a presentation and research tool. One of the biggest features is the ability to schedule captures. You could use this to, in effect, download the morning paper before you arrive at work. You could schedule *WebBuddy* to visit a site such as the online edition of the *Chicago Tribune* and schedule it to capture the news page and follow all links one level deep. It would not only download the index of news stories, but each news story, as well. That's especially handy if you're connecting to the 'Net with a modem because you won't spend much time waiting for each individual page to load. If you're on a high-speed, office network connection, it probably wouldn't be worth the effort.

Another great *WebBuddy* feature is the option that lets you download an entire Web site, or specify the number of levels deep you'd like to download. With the other programs, you'd need to download each page, one at a time. With *WebBuddy*, you can go to the top page, click a few buttons and save dozens or hundreds of pages.

## Check Your ISP

**N**ot all the solutions to a faster Internet connection involve software or hardware on your end. Sometimes it's your Internet service provider (ISP) that's dropping the ball. If you're still frustrated by your Web cruising speed after you've done all you can to improve your computer, it may be time to consider shopping around to see if other ISPs can offer a better connection. Keep in mind, they can't offer you the impossible (for example, a blazingly fast network connection for only \$19.95 a month), but there are always some ISPs better than others. Before you dump your current ISP, though, be sure to call and ask whether they have any ideas on how to improve your current connection speed. Dial-up numbers do change, and higher speeds could be as easily achieved as changing the number you dial.

If you can't get satisfaction from your ISP, though, you should consider a competitor. More and more ISPs are waving startup fees, so it should only cost the going rate for a month of service (or a fraction thereof) to try out some other ISPs. Key statistics that indicate whether you'll get better service are the connect speed (which can be found after you connect by double-clicking the modem icon in the bottom-right corner) and the throughput rate, which you'll see in *Navigator* and *Internet Explorer* as the speed at which files download.

There's also a way to see how good a connection your ISP—and its competitors—has to the Internet. First, you'll need to know the ISP's Universal Resource Locator (URL), such as <http://www.mysp.net>. Collect those for each of the ISPs you'd like to test, then visit a Traceroute server. Two good ones are Consumer.net at <http://consumer.net/tracert>

and Yahoo Traceroute at <http://net.yahoo.com/cgi-bin/trace.sh>. These servers trace the path from one computer to another on the Internet, measuring the number of stops along the way and the time the trip takes. The ISP with the fewest stops and the shortest time has the best connection. Remember that this works better for local ISPs than nationwide ones because a small ISP's Web server is generally close to the ISP's modem server on the Internet. A nationwide ISP, on the other hand, could have its Web server in San Francisco, while the modem server you're dialing into could be halfway across the country.

The ISP solution is admittedly a long shot, but it's not an impossibility. Of three local ISPs we tested, one consistently had throughput rates half those of other ISP in town. □



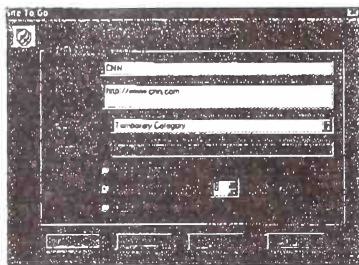
WebBuddy is not without its drawbacks, either, though. Some animated graphics didn't save correctly, and on some pages, only one frame is saved.

**Browse Smarter.** *Alexa*, a free add-on to Navigator and Internet Explorer promises to help you browse faster by making your browser a bit smarter. To do this, it places a toolbar across the bottom of your browser window that offers suggestions as to what other related sites you should visit and a little information about the page. The information—generally how well trafficked it is (in the top 10,000 visited sites for example)—is not very useful, especially on pages for companies without their own domain. For example, <http://www.isp.net/bobsdiner> would give info about ISP.net, not Bob's Diner.

The most persuasive reason to get the software (the site recommendations) are hit-and-miss. Sometimes *Alexa* will pull up some great sites that you wish you'd discovered a few months ago while other times you won't find a good suggestion in a list of 10. More often than not, however, there were at least a few worthwhile suggestions. *Alexa* is more handy for, and geared toward, novice Web surfers who need or want a little help finding their way around the Web (and who don't mind the ads on *Alexa*'s toolbar at the bottom of the screen).

More experienced users might also enjoy the program, though, because it does save time finding related sites. It also offers two other handy features in. *Alexa* offers a way to search the *Encyclopaedia Britannica* and Merriam Webster Online dictionary and thesaurus from the *Alexa* toolbar and an option that will search an online archive for pages that report File Not Found errors. While the encyclopedia/dictionary/thesaurus search option was very handy, we weren't able to find any pages with File Not Found errors that *Alexa* was able to find in its archive. In any case, it's easy to minimize the toolbar when you don't need it, the price is right, and it doesn't cost anything to give it a test drive.

**Call Waiting?** If you have call waiting, downloading large files can be a nightmare. You're forced to either turn calls away for as long as an hour or two or risk having the download interrupted and ruined. You generally have to restart at the beginning when a download is aborted. Then there's the long downloads aborted when somebody picks up the phone and the



Have a World Wide Web site you need to save, but want more than a text copy or a printout? *WebBuddy* saves Web pages or entire Web sites, complete with graphics.

modem hangs up. With Headlight Software's *GetRight* 3.2, such worries are a thing of the past. Interrupted downloads easily can be resumed once you reconnect to the 'Net, using as many tries as it takes to get the whole file.

We tested *GetRight* several times on large files and were merciless in terms of disconnecting the phone line repeatedly to drop the connection. Despite the abuse and having to resume the download several times, *GetRight* downloaded the files without a hitch. It's a handy tool that would be perfect if it was integrated into the browser better. To use it, you must right-click the link to whatever it is you want to download then select Copy Link Location. *GetRight* will pop up and ask whether you'd like to download the file with *GetRight*. The program runs into trouble if a link points to a redirector that points to the file to download (not simply the file itself). In such cases, *GetRight* can't follow the link, so it can't download the file. You still can download the file through your Web browser, but you won't have the protection *GetRight* offers.

These tips should help you coax a little more out of your modem through some crafty software. At the very least, you should no longer feel hopeless in your quest for faster, less frustrating, Web-surfing expeditions. ■

by John Lalonde

#### For More Information:

*Alexa*  
free  
Alexa Internet  
(888) 862-5392  
(415) 561-6789  
<http://www.alexa.com>

*CatchTheWeb* 1.06  
\$39.95

Math Strategies  
(888) 236-2446  
(336) 855-7065  
<http://www.catchtheweb.com>

*CheckIt NetOptimizer* 1.00  
\$39.95  
TouchStone Software  
(800) 932-5566  
(714) 969-7746  
<http://www.touchstonesoftware.com>

*GetRight* 3.2  
\$17.50  
Headlight Software  
(888) 201-7131  
(605) 284-2681  
<http://www.getright.com>

*SurfExpress* 1.1.2  
\$14.95  
Connectix  
(800) 950-5880  
(650) 571-5100  
<http://www.connectix.com>

*SurfSaver* 1.1  
\$39.95  
askSam  
(800) 800-1997  
(850) 584-6590  
<http://www.surfsaver.com>

*WebBuddy* 1.1  
\$39.95  
DataViz  
(203) 268-0030  
(800) 733-0030  
[http://www.dataviz.com/Products/WebBuddy/WB\\_Home.html](http://www.dataviz.com/Products/WebBuddy/WB_Home.html)



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## Bacon's

## trends and technology

## Search Sites Refine Their Technology and Methods

## The "Pay to Be Found" Model Is Spreading

**F**or the past year, it seemed like search-engine firms have been focusing on everything but searching. Features such as free e-mail, language translation, and stock quotes are all available from would-be Web portals, but rest assured that a lot of effort is going toward making finding information online faster and more intuitive as well.

Although not technically a search engine, Alexa Internet's Alexa 2.0, a "WebCrawler" that can be integrated into the most recent versions of Netscape Navigator and Internet Explorer, tries to find patterns in Web-site usage that will

help surfers find what they seek.

Browner Kable, president of Alexa Internet, describes Alexa as a companion guide to search engines. "Rather than offering a keyword search, Alexa uses Finely Technology to leverage more information than the contents of the Web site, telling the user what other people thought of the page."

Other search-engine firms attempt to add some personality to their services. Ask Jeeves ([www.askj.com](http://www.askj.com)), for example, attempts to answer questions posed by users with sometimes hilarious but frequently useful results. When asked for the name of Sherlock Holmes' brother, the ninth response brought up a film title about the detective's brother.

Mycroft, but the third response listed a page about getting green cards for relatives.

As the number of users online has increased, so has the value of a given search result. Real Names is a service that, for \$100 a year, allows you to use a keyword as an actual address. By registering a brand name or product description, companies can bypass using URLs completely. For example, typing in "new beetle" in Real Names' search box takes you directly to Volkswagen's New Beetle page.

Another service, GoTo.com, also works on the pay-to-be-found principle. Results from GoTo's ink-tom-driven search engine are listed according to which companies paid for placement. A search for "books"

shows that the top 24 sites listed will pay GoTo anywhere from a penny to 10 cents for a hit. Over 1,000 advertisers so far have bid to pay for high placement, including Barnes and Noble and Online Amino.

However, as David Card, an analyst at Jupiter Communications points out, "Just because someone paid for a top spot doesn't mean it is the most useful."

As the Internet expands, the problem will not be how to find information, but creating a format for presenting it that will make it useful. According to Card, "It's no accident that Yahoo leads the field. Having humans make decisions on content classification marks the difference between raw data and information." —Mannah Kinnerley

## DIRECT CURRENTS

All the Pretty PCs  
PCs Should Look Better, and Will

**C**omputer journalists are rarely called upon to render aesthetic judgments or contemplate the beauty of the machines about which they write. Perhaps this is because most computer manufacturers don't give beauty much thought. Now, however, a clever few are experimenting with a range of new system designs and color schemes to give personal computing a face-lift.

The progress toward prettiness has a precedent. In the early days of the automobile, Henry Ford built his company by offering the Model T in any color the customer wanted, as long as it was

black. Today, because appearance is one of the most important factors in making a purchase, Ford has diversified its offerings just a bit. PC vendors will soon have to do the same—they will have to make PCs beautiful.

David Gelertner, a professor at Yale University, calls this curious application of aesthetics "machine beauty," defined in his book of the same name as the "happy marriage of simplicity and power." It's the affection you feel for the Ducati 916 even if you don't ride a motorcycle. PCs rarely evoke this kind of passion, but this is

One of the most stunning examples of machine beauty I have seen recently is the Sony VAIO 505G. At a mere 2.9 pounds and less than an inch thick, this is a sleek machine by any measure. But it's all the little touches that make the VAIO beautiful: the feel of the silver magnesium case, the way the integrated stylus disappears into the display, the way the slim battery slips into the back of the system, the pulse of the 200MHz MMX Pentium processor inside.

When our Mobile Computing editor first showed me the VAIO 505G, I went, in less than a minute, from being awestruck to coldly calculating how I could get Ziff-Davis to buy me one.

Big changes are being made to the desktop as well. The iMac made a big splash this summer with its translucent aquamarine case, integrated display, and rounded corners. To be sure, these features won't make up for a dearth of third-party software support. But the iMac packs enough power, with a 200MHz PowerPC processor, to shake things up a bit.

The Panda Project has made an even more dramatic design departure, taking the ordinary PC chassis and standing it on its head (a corner, to be precise). The CPU for the company's Rock City PC is a 10.4-inch cube, available in basic

form factor. The Panda Project has managed to deliver a PC that is functionally equivalent to its boring beige counterparts that we all know and ignore. Panda even offers a sub-\$1,000 model to satisfy the cost-conscious as well as the fashion-conscious.



## IT JUST LOOKS BETTER

PC makers have been pushing power for a while now, but because everyone has access to the same components, this is a relatively level playing field. This leaves vendors to compete on price, an unpleasant experience for everyone except the buyer.

But what if a vendor sold a PC that simply looked better? All other things being equal, most shoppers would pick the more attractive system. In fact, they may even pay more for it.

Consumer appreciation for machine beauty helped Nokia capture such a large share of the cellular-phone market. It's one of the main forces driving the sales of flat-panel displays. And it will be the most obvious way PC vendors differentiate their products in the future.

Beauty should never be the only factor in buying a PC, or any tool for that matter. But it is clearly becoming more important. So don't be surprised if words like "design," "aesthetics," and "elegance" start showing up more

Dan Costa





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The Washington Post  
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3985-A

# Your Past Is Your Future, Web-Wise

By JOSEPH D. LASICA

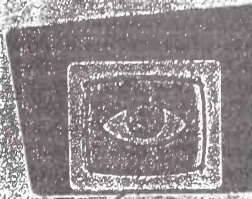
**O**ur past now follows us as never before. For centuries, refugees sailed the Atlantic to start new lives. Easterners pulled up stakes and went west to California. Today, however, reinvention comes less easily and second chances seem more remote. You may leave town, but your electronic shadow stays behind, as anyone who has ventured onto the Internet well knows.

We often view the Internet as a communication medium or an information-retrieval tool, but it's also a powerful archiving medium that takes snapshots of our digital lives—which can be stored forever.

It's not just official documents or consumer profiles about us that are being collected, but the very essence of our daily online existence: Our political opinions, prejudices, religious beliefs, sexual tastes and personal quirks are all becoming part of an immense media goop that is coagulating into a permanent public record. What is different about

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Joseph Lasica writes frequently about new media.



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**October, 1998****SECTION:** No. 10, Vol. 18, Pg. 116; ISSN: 0886-0556**IAC-ACC-NO:** 50267818**LENGTH:** 442 words**HEADLINE:** Search Sites Refine Their Technology and Methods**BYLINE:** Kinnnersley, Hannah**THIS IS THE FULL TEXT****BODY:**

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document?\\_asset=GaH8uKO](http://web.lexis-nexis.com/requester/document?_asset=GaH8uKO)

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Tuesday, September 8, 1998

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**LANGUAGE:** ENGLISH**IAC-CREATE-DATE:** August 31, 1998**LOAD-DATE:** September 01, 1998**Client ID:** 130

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## Technology News

## Snap Banks On Portal-Browser Mix

(10/01/98 6:35 a.m. ET)

By Malcolm MacLachlan, [TechWeb](#)

The browser-portal mix has proven to be a potent formula for Netscape, and now another company is trying to copy that success -- but it isn't Microsoft.

On Tuesday, Snap announced a deal with Bigfoot and Alexa to create a browser-portal combination of its own. Bigfoot will make Snap the default portal for its [NeoPlanet 2.0 Internet environment](#), an interface built on top of Microsoft's Internet Explorer 4.0.

NeoPlanet 2.0 contains a built-in set of channels on different topics designed to simplify navigation.

Bigfoot will integrate the Snap site into the Neoplanet interface. Snap is a portal site started by Cnet, and is intended to be a one-stop site for people seeking news, information, and services on the Web.

Alexa will contribute its related-links service to the package. NeoPlanet users who click on the "What's Related" button will get a list of sites related to the one they are viewing.

Alexa's related-links service also [appears](#) on Netscape's beta release of Communicator 4.5, released in July. Every time someone uses the service, they will see a small banner ad sold by Alexa.

Bigfoot has been looking for a high-profile content partner, said Drew Cohen, general manager for NeoPlanet. He said the Snap-NeoPlanet combination would be similar to Netscape ([company profile](#)), making its Netcenter site the default page for its own browser. Netcenter has

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hidden this combination to become one of the most popular sites on the Internet.

Forty-five ISPs already distribute NeoPlanet, and Bigfoot will soon announce more, Cohen said. Most of those ISPs, Cohen said, will probably create customized versions of NeoPlanet that include their logos, and link to a special ISP page that includes Snap content and prominent links to Snap.

In return, Snap will distribute NeoPlanet, but the details have yet to be finalized, Cohen said. For instance, NeoPlanet could be promoted in NBC's fall marketing push for Snap. NBC owns a minority stake in Snap.


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"That is clearly one of the things that is very enticing with Snap," Cohen said of the NBC connection.

Bigfoot has begun a major marketing push of its own, hoping to register half a million users by the end of the year. But Bigfoot faces an uphill battle, said Barry Parr, an analyst with International Data Corp., because both Netscape and Microsoft are targeting portal sites. In the process, they are likely to try to close off features in their software that provide openings to portal competitors. 

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OCTOBER 4, 1993



Bacon's

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# Jexa makes sense of chaos on the Internet

BY WILLIAMS

nigan Post

Internet's vast resources are often compared with a library with all the books dumped in the floor. That's not a pretty picture. But each engine fail by retrieving too much information to handle, the analogy feels close to the

a (www.alexa.com), named for the great library of Alexandria, Egypt, that was destroyed by the third century, is a unique effort to both the body of information contained in the Internet where countless pages are scrapped every day to provide intelligent assistance in navigating the past six months, an Alexa toolbar residing at the bottom of my browser has been feeding

slaves — data about each site I visit — and recommendations on other sites that I might reloaded information.

pose you go to the Dead People Server, a site as exhaustive information about those who with us, organized alphabetically (www.citynited/leandrop). When I'm there, Alexa notified me that I had just died. The Political and Biography. Well, Always Remember the page for dead rock stars! and, of course, Dead

Elvis's Page.

Moving on to Biography.com, I can click on another button to find out who owns the site (Biography Channel) with address, phone contact number, the domain's registration date and other information. — like how the site ranks in terms of Web visitors, its speed, freshness, number of pages and how many other sites link to it.

If available, there are also site reviews and the collaborative ratings of Alexa users. (You're offered the opportunity to vote on whether you like each site.)

And yet, there's an ad, a very small ad, that changes as I move to a new site.

There's also a "previous" button that's transparently gray. When this "archive" function returns after some reconstruction, Alexa will allow you to retrieve said Web pages — ones that used to be there but now yield a "404 Not Found" message when you ask for them.

Alexa pulls off this miracle by dipping into its 12 trillion-byte archive, which contains copies of Web pages that it's been collecting since early 1996. It's been taken off line for work because the archive just got too plain big to serve back quickly.

I confess that I am hooked on Alexa. But what is

it? Not exactly a search engine, not really a Web site directory.

The term that seems to be sticking is surf-engine, said Brevier Kahle, chief executive of Alexa Internet, which has its headquarters in the Presidio in San Francisco. It was founded by the company of computer scientist in 1996. "It's a Web Assistant, like the really smart friend with you," Kahle says. "The Web Assistant takes you, Wired magazine's September issue deemed surf engines "trend" and portals "fired." Portal sites try to hold your attention and keep you, while Alexa travels out on the Web with you and guides your path.

Surfing with Alexa gives consumers and business people information that helps them make information trust decisions," according to Kahle. For each of the 1 million Web hosts documented and ranked in popularity by Alexa, information on who's behind it and where it's located is collected from official domain name registration information. Site reviews and ratings come from Alexa partners, such as Yahoo! Internet Life and the Recreational Software Advisory Council.

But the collective intelligence behind the related links feature that make Alexa unique comes from users like me and you. When activated next to our

browsers, Alexa anonymously tracks the decisions that we make about what's worthwhile or worthless, analyzing our clicking on or clicking away from pages on the Web.

It calculates the paths that we choose and the time that we spend visiting. Then the information is used to aggregate to help inform future users. It would be ideal to have a recommendation engine. Overall Web traffic patterns, link structures and the content of Web pages figure in to the compilation of related links.

The usage paths are separate from information that could identify an individual. Alexa says it follows a privacy policy that requires any information from an individual will not be provided to a third party. I'm sure that some people would trust that promise on privacy but it's good enough for me.

The other nice thing about Alexa: You don't have to buy it. The newest version of Netscape Communicator (4.5) has the Alexa links feature embedded as its "What's Related" component of Smart Boy. Internet Explorer 4.0 has a version of the full Alexa service that can be installed in less than a minute.

You may also download Alexa for Netscape Navigator 3. Communicator 4.0 or Internet Explorer 3 running on Windows 95 or NT 4.0. An "alpha" version for the Macintosh is available for testing.



# Alexa Makes Sense Out of the Chaos That Tangles the Web

By MARCO WILLIAMS  
Netherlands Post/Editor

9/28

The Internet's vast resources are often compared with a library with all the books dumped on the floor. That's not a pretty picture. But when search engines fail by retrieving too much information to handle, the analogy feels close to the truth.

Alexa ([www.alexa.com](http://www.alexa.com)), named for the great library of Alexandria, Egypt, that was destroyed by fire in the third century, is a unique effort to both preserve the body of information contained in the Internet, where countless pages are scrapped every day, and to provide intelligent assistance in navigating its random paths.

During the past six months, an Alexa toolbar residing at the bottom of my browser has been feeding me site stats—data about each site I visit—and offering recommendations on other sites that I might try for related information.

Suppose you go to the Dead People Server, a site that has exhaustive information about those no longer with us, organized alphabetically ([www.cilly-nl.com/thanadps](http://www.cilly-nl.com/thanadps)). When I'm there, Alexa shows me other sites like Pinta Grave, the Political Gravesyard, Biography, Well Al-ways Remember (the home page for dead rock stars) and, of course, Dead Elvis's Page.

Moving on to Biography.com, I can click on another button to find out who owns this site (the Biography Channel) with address, phone contact number, the domain's registration date and other information—like how the site ranks in terms of Web visitors, its speed, freshness, number of pages and how many other sites link to it.

If available, there are also site reviews and the collaborative ratings of Alexa users. (You're offered the opportunity to vote on whether you like each site.)

And yes, there's an ad, a very small ad, that changes as I move to a new site.

There's also a mysterious button that's temporarily grayed out, but will be made active again in October. When this "archive" function returns after some reconstruction, Alexa will allow you to retrieve dead Web pages—ones that used to be there but now yield a 404 Not Found message when you ask for them.

Alexa pulls off this miracle by dipping into its 12 trillion byte archive, which contains copies of Web pages that it's been collecting since early 1996. It's been taken off line for work because the archive just got too plain big to serve back quickly.

I confess that I am hooked on Alexa. But what is it? Not exactly a search engine, not really a Web site directory. . . .

## Places to Go

As Halloween costumes and decorations arrive in stores, these ghoulish ghostly sites crank up for the holiday season:

- Dead People Server: [www.cynet.com/thanadps](http://www.cynet.com/thanadps)
- Find a grave: [www.findagrave.com](http://www.findagrave.com)
- Political Graveyard: [www.politico.com](http://www.politico.com)
- Biography.com: [www.biography.com](http://www.biography.com)
- Well Always Remember: [www.historical.org/wellalwaysremember](http://www.historical.org/wellalwaysremember)
- Dead Elvis's Page: [www.starworld.org/dead](http://www.starworld.org/dead)
- Or find out about "dead media" and join the necronauts at the Dead Media Project: [www.isidore.com/~and/dm/and.html](http://www.isidore.com/~and/dm/and.html)



"The term that seems to be sticking is surf engine," said Brewster Kahle, chief executive of Alexa Internet, which has its headquarters in the Presidio in San Francisco. Kahle also founded the nonprofit Internet Archive of the Web to record the history of cyberspace in 1996. It's an Internet assistant, like having a really smart friend with you."

Trend watchers take note: Wired magazine's September issue deemed surf engines "wired" and portals "tired." Portal sites try to hold your attention and keep you, while Alexa travels out on the Web with you and guides you path.

Surfing with Alexa gives consumers and business people information that helps them make "informed" trust decisions."

According to Kahle, for each of the 1 million Web hosts documented and ranked in popularity by Alexa, information on who's behind it and where it's located is collected from official domain name registration information. Site reviews and ratings come from Alexa partners, such as Yahoo Internet Life and the Recreational Software Advisory Council.

But the collective intelligence behind the related links feature that make Alexa unique comes from users like me and you. When activated next to our browsers, Alexa anonymously tracks the decisions that we make about what's worthwhile or worthless, analyzing our clicking on or clicking away from pages on the Web. It calculates the paths that we

choose and the time that we spend visiting. Then the information is used in aggregate to help inform future users. It could be called a recommendation engine. Overall Web traffic patterns, link structures and the content of Web pages figure in to the compilation of related links.

The usage paths are separate from information that could identify an individual. Alexa says it follows a privacy policy ensuring that any information from an individual will not be provided to a third party. I'm sure that some people won't trust that promise on privacy, but it's good enough for me.

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You may also download Alexa for Netscape Navigator 3 Communicator 4 or Internet Explorer 3 running on Windows 95 or NT 4.0. An "alpha" version for the Macintosh is available for testing. Don't wait. Get it now.

Marco Williams's e-mail address is [williams@usaipost.com](mailto:williams@usaipost.com)





RATINGS: ★★★★★ TOP DOWNLOAD IN THE WORLD ★★★★★ WORTH WAITING FOR ★★★★★ BEEN THERE, DOWNLOADED THAT ★★ CORRUPTED FILE ★ ATARI DOWN (68)

download sites. It lets you tweak more things in a download than I care to think about. Download Butler

### Calculating Downloads

★★★★ Hold it! Do you really have time to download that file? Find out before you click on the Download button by surfing over to the Intel Owner's Club Download Calculator. This isn't a download itself but an online app that quickly converts the size of a file into precise download times for everything from a 14.4Kbps connection to a T1. Download Calculator

### Avoid Traffic Jams

★★★ Of course, you know you can't believe what the Intel Download Calculator says. That's because it figures out

download times based on ideal connections. Yeah, right. This is the Web we're talking about. Nothing's ideal. If you try to download during the Internet's drive time, forget the predictions. Your download's going to be clogged in traffic. If there's no hurry for the download, test the site for 24 hours with Any Speed. It sends pings every few milliseconds to whatever location you desire and graphs response times against the time of day. That way you'll know when the streets to a download site are deserted. Any Speed

### All's Ferret

★★★★ A no-brains alternative to Copernic (page 300, bottom) is WebFerret. It taps into only ten search engines, and you have fewer options than in Copernic, but it's small, fast,

### TWEAKDUN IT

★★★★ Well, now we can start downloading. . . . Hold it. Wouldn't it be a good idea to make sure our internet connection is running at its peak? That's a job for TweakDun, a utility that automatically changes certain Windows default settings, such as the maximum size of a transmission unit, to improve Net performance. It keeps a local copy of IP addresses of sites in your Favorites list, which saves a few seconds over looking them up on a server. It not only tells you how to do something, it tells you why you'd want to do it. I ran some very casual tests that I wouldn't stand behind if anyone as much as cleared his throat, and I really didn't notice sparks flying off my modem. But I'm going to send in my \$15 to unlock all the other Net speed tweaks. TweakDun 2.2



and the results I got were generally as good as Copernic's. I looked for my name and got the Ron Hightower's White Chucks page, which reinforces my belief that finding what you want on the Net is still more about karma than high technology. WebFerret

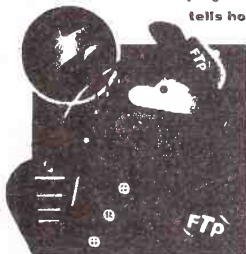
what it means? CookieMaster lets you delete any cookies you think are crumbly. . . . I'm sorry. You know how I hate to pun. ZDNet's CookieMaster

### DECISIONS, DECISIONS

★★★★ We'll be ready to start downloading any time now. But first, we need something to take care of those download pages that list umpteen mirror sites you can also use to suck down the same file. Which will be faster? The one nearest you? Fat chance. You need Dipstick. When faced with multiple download sites, drag the URLs of the sites to Dipstick's window, kill a few seconds with some in-chair aerobics, and Dipstick will give you a ranked list of all the sites along with the minimum, average, and maximum round-trip time for its test pings and a percentage that

tells how many data packets got

lost en route. You'd be surprised. A Microsoft download site in the Czech Republic was twice as fast as the company's California site. And Dipstick's free. What else do you want? Dip your stick! Dipstick



### Cookie Cutter-Upper

★★ Wait! Mama always said, "Don't take any wooden cookies." You listen to your mama and download CookieMaster before you start hanging around sites that want you to "register." CookieMaster is a freebie from the nice folks in the Paranoia Division at Ziff-Davis. It displays a list of all sites that have stuffed cookies into Internet Explorer 4.0 or Netscape Navigator. It also tells you the name of the site assigned to the cookie and the cookie's contents. Unfortunately, most of the contents are gibberish. But if other people think this information about you is important, don't you want to see it even if you don't know



By Ron White

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Interactive Week

10/5/98

F T R T F

**ESPN Internet Ventures**

President **Tom Phillips** has resigned to "pursue other interests."  
Senior Vice President of Programming **Geoff Reiss** was named interim general manager of the group, best known for the [www.espn.com](http://www.espn.com) site.

Also, **ESPN.com** said it will partner with multimedia content aggregator **Broadcast.com Inc.** to integrate ESPN's college football information with streaming media broadcasts carried on [www.broadcast.com](http://www.broadcast.com).

**Wired Digital Inc.** this week plans to launch a marketing campaign in support of its HotBot navigation service ([www.hotbot.com](http://www.hotbot.com)). The company expects to spend between \$10 million and \$15 million this year and next on television advertising focused in selected metropolitan markets.

**Bigfoot International Inc.** ([www.bigfoot.com](http://www.bigfoot.com)) reached agreements to incorporate offerings from the Snap! navigation service and Alexa Internet link service into its NeoPlanet browser ([www.neoplanet.com](http://www.neoplanet.com)).

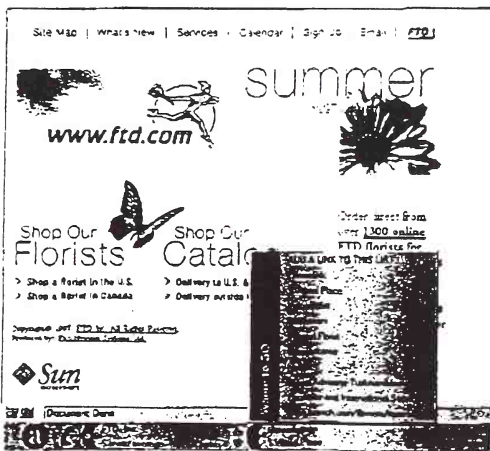
**Microsoft Corp.** ([www.microsoft.com](http://www.microsoft.com)) converted 70 topic-specific forums previously available only via its proprietary MSN Internet access service to be accessible from its MSN.com portal site. Microsoft combined the forums with 50 chat areas offered on existing Web properties to create an aggregated chat offering covering 120 topics.



## Alexa gets you where you want to go

### Navigation service alleviates search engine roulette

*It's no secret that search engines are now one of the weaker links on the Web. When Web users go to a search site, they usually expect plenty of duplicate URLs, irrelevant sites and links to pages that vanished weeks or even months ago.*



Typical page at Alexa.com. The "where to go next" menu, along with the basic toolbar on the bottom, which gives the four most common navigation options, basic server info, and buttons for contacting the archive and online communication features.

Alexa Internet, a San Francisco-based start-up, is offering a product that may provide a real alternative to search engine roulette. The company's Alexa navigation service is, in equal parts, a search engine, a directory service à la Yahoo, an archive, and a collaborative filtering system. The resulting combination is a novel—and effective—tool for navigating the Web.

The Alexa service consists of a client application that appears as a toolbar at the bottom of a user's display. When the user goes to a Web site—a travel agency, for example—the client simultaneously sends the URL to the Alexa server, which suggests other Web sites that offer related content. Even if the initial link is lame and obscure (try entering "travel agency" in Alta Vista and see what you get!).

Alexa can point to higher quality sites—Travelocity, perhaps, or TravelWeb. If the user clicks through to a related but somewhat different site, such as a travel firm that deals specifically with cruises, Alexa will note the distinction and display updated links that match the user's interests.

Alexa works, first, by regularly crawling and archiving the entire public Web (about two terabytes of data) at the rate of around a terabyte per month. The service, which has been certified by the nonprofit TRUSTe (formerly known as e-Trust) initiative, honors the robots.txt protocol and will ignore sites at the owner's request. Alexa also regularly turns over its archives to the Internet Archive, a nonprofit organization dedicated to preserving a series of historical "snapshots" of the Web.

While Alexa archives the Web, the system uses several techniques to analyze sites. First, Alexa uses neural-net technology to perform a text analysis of sites, looking for pages and sites with similar characteristics. The system also analyzes link structures, detecting patterns that point to particularly common or popular sites. The idea here is to exploit the expertise built into the thousands of link lists and "favorite sites" pages, in almost every conceivable category, already available on the Web. In addition, the system makes creative use of public databases to find companies operating in the same business category—and that might have similar Web sites.

Alexa also includes data from the anonymized surfing habits of its users: which sites they visit, how deep they go, how long they linger and where they go next. Users can also explicitly state their opinions by voting on whether or not they found a given site helpful.

The system offers some other interesting features. Because Alexa archives Web content, users who click through to a "dead" page can receive an

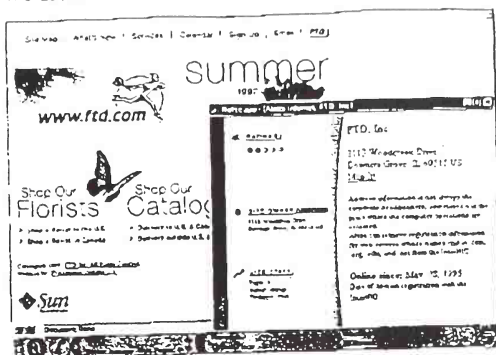
archived copy of the page instead of the usual "404—Not Found" error message. The toolbar can also provide information on who owns a site, how many pages are on the site, how many other Web sites point to the site, how frequently it is updated and how popular it is among other Alexa users. Finally, Alexa will show which other users are online and allow real-time communication with them.

Ads that stick. As always, the key question is "where's the money?" Alexa is using an ad-based business model, placing the ads on the toolbar and on an extended pulldown list of recommended sites. The ads are context-sensitive, so that users looking for that perfect travel site might see a Travelocity ad—even while they browse through competing sites.

While we wouldn't hazard a guess on whether this variant of Web advertising will fly when so many others have crashed and burned, it is certainly interesting. By keeping the ad on the Alexa toolbar, the service can keep an advertiser visible across a series of Web sites, something that even the biggest site-based ad networks can't promise yet. Alexa places ads only on designated areas of the toolbar, keeping plenty of free space for the system's objective choices.

Privacy issues might also be a concern here, but in this case Alexa has done everything right. The company guarantees that data from users will not be divulged to other firms. Alexa has also secured an endorsement from TRUSTe, a nonprofit consortium organized by the Electronic Frontier Foundation and CommerceNet, which monitors and certifies sites that adhere to its privacy guidelines. Users seem to appreciate the effort: according to Z Smith, the company's vp of engineering, more than 90% of the beta users have sent their E-mail addresses to use Alexa's instant messaging feature. Initially, the company





**Detailed view.** The server information box includes the InterNIC summary on the owner's name, address and phone number; the site as ranked by Alexa users; and summaries of the server's speed, number of pages on the site, average freshness of pages and so forth.

had predicted that only 30% would do so.

We had an opportunity to see the Alexa system demonstrated, and then to try it ourselves. The results were impressive. Alexa was able to provide relevant links from some pretty obscure sites, and it did a good job of tailoring its recommendations as we surfed through sites with somewhat different types of content. We did encounter some bugs, such as the occasional off-topic recommendation list. Alexa is also rather slow at delivering pages out of its archive, a process that can take as long as 15 minutes. Part of this is inevitable, since the system keeps 90% of its data on tape robots. Part of it is also due to a rough caching model for what goes on the system's disk cache, where the other 10% of the data is available for higher speed access. Given the system's impressive showing at such an early stage in its development, however, we believe it will get even better as larger numbers of users come online and Alexa continues to refine its technology.

Alexa isn't going to replace traditional search engines, which will remain the best option for users who have a very specific query and a good idea of what they expect to get in return. Nor will it replace directory-

based services such as Yahoo, which can offer more complete lists of options organized in a distinct taxonomy. Alexa does, however, provide a convincing alternative for more general searches and context-based "where next?" queries, just the kinds of searches that make search engines so frustrating and painful to use. Alexa is, in short, a great idea; we hope the company can combine that idea with effective marketing and a sustainable business model.

Alexa is currently taking applications for its beta program, which will run through the summer. According to Smith, the company hopes to have the system ready for general use in a couple of months.

Matt McKenzie

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www.alexa.com





TECHNOLOGY



## ✕ As Go Surfers, So Goes Alexa

by Chris Oakes

5:03am 24 Jul 97 PDT The Web wants to tell you a little bit about itself. At least that's the mission of a new service from San Francisco start-up [Alexa Internet](#). A free, advertising-supported "intelligent navigation service," Alexa acts as a browsing companion, providing contextual site information via a slim Windows toolbar.

The toolbar software, available in a beta version from Alexa's [Web site](#), receives and presents information independently from a user's browser and offers a range of basic data and site ratings.

"It's a navigation service that gets better as the Web grows and as there are more users," said Alexa Internet president and co-founder Brewster Kahle, who also founded WAIS Inc., an electronic publishing company sold to America Online in 1995. "Other people have found good things and not so good things," he said. "And as the discernment of users gets better, Alexa gets better."

The "meta-data" provided by Alexa is oriented around two questions: Where am I and where should I go next? The first question is answered via such details as ratings of a site's server speed, popularity, and content freshness, and what paths users tend to follow through the site. The second question is answered with a list of links to related sites others have frequented.

In drawing conclusions about sites, Alexa bases its ratings and recommendations on an analysis of patterns within the Web at large - as indicated by the preponderance of links to a particular site, for example. It also builds its opinions by tracking the usage "paths" of other Alexa users.

Jerry Michalski, managing editor of industry newsletter *Release 1.0*, likes what he sees and says Alexa has no direct parallel, even in agent-oriented sites recommendation services like [Excite](#).

The general browsing population, Michalski believes, will take to it when it sees that rather than an overview map provided by directories like Yahoo, Alexa is a map with a localized structure. "Wherever you happen to be, it gives you the major roads out," he said. "That's pretty useful."

Alexa's Web analysis is based on a massive "copy of the Web" - an archive of all sites that have existed since early 1996. Already exceeding 5 terabytes in size, the company says the archive is updated with a new Web "snapshot" about every 60 days.

But Alexa's techniques raise some questions about the service's mechanics and even user privacy. For one thing, it's a service that gains intelligence as it is used, and its ratings can't yet draw on a wealth of Alexa-tracked "usage paths." To remedy this, Alexa editors are manually ensuring that "top Web sites" start out with appropriate ratings.

As far as the privacy of information on users' paths through the Web, Kahle says Alexa doesn't know who the users are - only what they're doing. "It's not that we don't exchange information [on a user's identity and behavior] - we don't have the information to exchange."

An additional feature similar to Excite's PAL chat service or

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AOL's instant messaging, Alexa's chat system can tell a browser who's online, and let them send messages in real-time.

Forrester Research senior analyst Mark Hardie says Alexa's success depends on its positioning versus directories and search engines. Alexa will have to make it clear that it's a navigation hub, educating Web users that "we're not about searching, we're about helping you get around."

The Web, as it continues to explode in content, may require the intelligence of a mass surfing population to help assess its content, as directories can only tally so much. "The richest directory that we know of points to less than 1 percent of all Web pages," Kahle said. That, he believes, leaves a lot of room for his service's approach.

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## You are a database and access abounds

Today's typical Net surfer can get all kinds of information that would have taken a private eye to turn up in the past, says Tom Sterner of San Francisco.

He ought to know. Sterner is an investigator with Decision Strategies International, and he isn't at all surprised at heightened concern about privacy in the age of the Internet. "Generally people freak out about people knowing stuff about them," he says.

Sterner and most investigators use specialized databases, whose "prohibitive" expense keeps them from the reach of the layman.

But that doesn't mean you can't find a lot of the same material elsewhere.

"If information exists in one place, it exists in more than one place," says database expert Carole A. Lane, who will testify Tuesday at Federal Trade Commission hearings about privacy online.

She calls that rule "Lane's First Law of Information." And it has a corollary: "If information exists anywhere, no matter how carefully guarded, it exists somewhere else, where virtually anyone can gain access to it."

Lane makes her point in a new book titled *Naked in Cyberspace: How to Find Personal Information Online* (Pemberton Press, \$29.95).

The book has more than 500 pages detailing how information professionals dig up data, and where they turn when they hit a dead end. It holds a few privacy lessons too.

In addition to databases with identifying information and public records from criminal convictions to fishing licenses, Lane cites sources even private investigators might not think to look at, such as alumni newsletters posted online (for news about marriages, births, job changes) and even genealogical bulletin boards.



• Jobs at USA

TODAY

births, job changes) and even genealogical bulletin boards.

"Genealogists are very generous about sharing data, and oftentimes it includes who the family members are now, and where they are," she says.

Genealogy may sound innocuous, but it could expose information that compromises privacy: mother's maiden name, for example, is often a key to sensitive financial data.

"I don't remember ever seeing mothers' maiden names in any site I've seen," Sterner says. "I would consider that to be the equivalent of a PIN for information."

Among other personal information Lane cites online:

- Phone directories. Many are free on the Web; some have enhanced features that let you type in a phone number to get name and address or print out a map of the neighborhood. Some even include unlisted phone numbers. While these are not given out by phone companies, they can be gleaned from other sources, such as information from product warranty cards, which is often sold to direct mailers.
- Marketing lists. Companies on the Web advertise all flavors of lists that allow advertisers to target specific types of consumers, from occupations (Database America touts 250) to people who have moved recently, are "upscale grandparents" or own pets. "Even pharmacies sell databases, which shocked me," Lane says.
- Internet discussion logs. Web sites including Deja News (<http://www.dejanews.com>) keep searchable records of ongoing conversations on thousands of topics, from TV shows to business to quilting.

A student might post uncensored anecdotes or opinions, "not realizing that somebody years later, perhaps a potential employer, might learn they had done things they were embarrassed by," Lane says. "They might never tell you what they saw, but they might toss your resume before ever calling you."

It's now possible to specify that a posting in an Internet discussion or "newsgroup" not be archived, but not everyone knows this, and many others just don't bother.

- Home pages. Do-it-yourself personal pages proliferate on the Web; tools to create them and places to publish them are now free with many e-mail accounts. And people post all kinds of personal information "not thinking how it could be misused," Lane says.

Examples include everything from resumes with home address, phone and hobbies to pictures of people's kids.

"I wouldn't post my phone number and address at the local grocery store bulletin board," Lane says. "So why would I post it online on the whole world's bulletin board?"





Home pages can be changed or taken down, of course, but even now "snapshots" are being taken of what's on the Web at any given time.

Brewster Kahle, known for designing the first Net publishing system, WAIS, is now creating an Internet Archive (<http://www.archive.org>).

His digital robots crawl the Web making copies of every page so scholars and historians in the future will be able to study the early days of the Net in the same way they now use letters and diaries to study the past.

"The wonder of the Internet is it's changing rapidly," Kahle says. With the archive, "you can dial the time you want" and see what was there.

People seeking specific personal information wouldn't want to download the massive archive files, but Kahle plans this summer to launch a library-type service called **Alexa**, which will automatically direct browsing software to grab a recent copy of a page if it can't be accessed directly.

His goal is simply to make the Web "more reliable and less flaky," but Kahle obviously sees privacy implications.

So far, though, he says, "The spooky aspects haven't cropped up."

And if anybody doesn't want his page archived, Kahle doesn't argue. "We take it off."

*By Leslie Miller, USA TODAY*

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# Program protects old Web sites from oblivion

Some years ago, Francis Fukuyama wrote a quirky and fascinating essay called "The End of History," in which he speculated that liberal democracy might be what he called the "end point of mankind's ideological evolution." Fukuyama's notion is more than a little debatable in the political realm, but you can sketch a different end of history

## COMPUTERS



Paul Gilster

when you consider our increasing reliance on digital materials. What if we put everything online, from our retail catalogs to our archives, and the hyperlinks fail?

It's a problem that Web users run into every day. Working on a research project, I recently compiled dozens of articles, many of them only available in online form, for my bibliography. Six weeks after finishing the document, I went back to double-check my sources, only to find that three of them were no longer accessible because their links no longer worked. Where did they go, and how can I cite them in a bibliography if they're going to disappear?

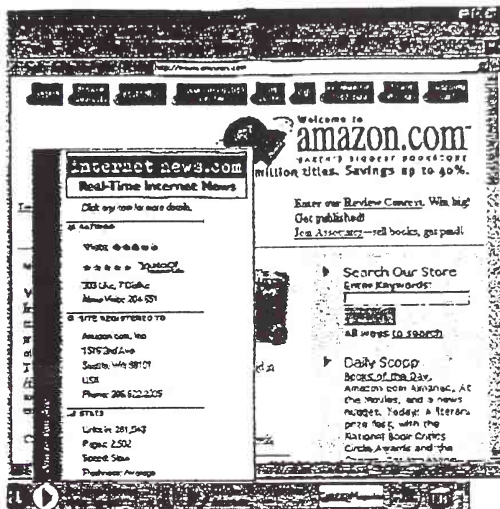
I'm sure you've had a similar experience. You find a hyperlink to a page that seems ideal for your purposes. But instead of loading the page, your browser displays an error message telling you that the document cannot be found. And here's a statistic that may give you a start: The average Web page has a lifetime of approximately 44 days. What to do?

One solution is to use **Alexa**, a program that taps an online archive of Web pages, including those that have changed address or been removed entirely by their owners. Using **Alexa** is like having a library of back issues of magazines and newspapers, only for Web pages instead of print. It's a kind of snapshot of the Internet at various points in its history. The free

program runs as a toolbar on your desktop and launches when you open your browser.

The database **Alexa** consults contained, as of late 1997, over eight terabytes of information; considering that the Web is doubling every six months, it should be twice that now. To give you a sense of scale, one terabyte is a million megabytes. A typical public library contains three terabytes of information, while the entire Library of Congress, if reduced to pure text, houses 20. The current Web takes up about five terabytes.

I use the term current Web because what **Alexa**'s parent company does is to make a copy of the Internet every 30 to 60 days. The company, **Arcade Internet**, is based in San Francisco, and is the brainchild of Brewster Kahle, inventor of the Wide Area Information Servers system (WAIS) that was one of the earliest Internet search tools. Kahle now provides **Alexa** to end users and operates the database that feeds it information, a huge project called The Internet Archive



**Alexa** is a software program that keeps an archive of Web pages. It's a free program that runs as a toolbar on your desktop.

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([www.archive.org](http://www.archive.org)).

Kahle is not a believer in history having an end, which is why he insists that we find ways to document and preserve the mutable phenomenon of cyberspace publishing. Already, historian David Allison of the Smithsonian Institution has used materials from the archive to create an exhibit of presidential election Web sites, material that might otherwise pass into oblivion the day after the votes are counted. Think of the 1960 election without our access to the presidential debates between Nixon and Kennedy and you begin to see the relevance of saving such information.

And it works for everyday Web work as well. **Alexa** will search for pages that have been removed from the Web and display them for you. It's not perfect, for the Web is always growing and the archive can never be complete, but if **Alexa** can find an expired page in its archive, you can still recover and use it.

Of course, issues of privacy come immediately to mind. What

happens if someone creates a Web page with personal information that he or she later wants remove from circulation? The immediate answer is to make possible for authors to exclude their material from the archive. In the long run, numerous questions involving the nature of online publishing and copyright must be resolved. By building this archive now, Kahle's company in some ways forces the issue, and it's one that needs fast resolution considering the impermanence of online data.

But **Alexa** does more than dump old Web pages. It also creates "Where to Go Next" suggestions. When your browser goes to a particular Web page, **Alexa** records the visit and the path through related sites, all on an anonymous basis. The software analyzes pages and sees which other pages have links to the site. It also lets users offer their suggestions about similar pages.

Teachers tell me they're using more and more students relying on the Internet for their research; in many cases, the challenge becomes to convince the kids that there are materials in brick-and-mortar libraries: traditional print materials—that should be examined before jumping to conclusions about any subject. If this trend continues, will a missing hyperlink mean that critical information can be erased in Orwellian fashion, manipulated by business government to control an outcome?

Now there's an "end to history" that's positively Kafkaesque in its implications, but **Alexa** is a first-generation tool that points to a possible solution. The program provides background information about each site and quick links to both the online *Encyclopedia Britannica* and *Merriam-Webster's Dictionary*. You'll need a 486 or Pentium processor running Windows and 3 MB of free disk space to run it. A Mac version is in the works. For more information and a free download, go to [www.alexa.com](http://www.alexa.com).

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THE CULTURE OF TECHNOLOGY  
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THE NET NEVER FORGETS | PAGE 1, 2

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of Table Talk

### RECENTLY

Strange Webfellows?  
By David J. Reardon

Beyond the question of informed consent lie larger questions: Should all of this electronic flotsam and jetsam be archived in the first place? What are the consequences for us if our digital footprints survive indefinitely? Who should decide whether they do survive?

The answers are hardly comforting, especially for those given to strong displays of emotion or opinion online. "We're now entering an era where tens of millions of people are speaking on the record without any understanding of what it means to speak on the record, and that's certainly unprecedented," says David Sobel, general counsel for the Electronic Privacy Information Center in Washington. "It is suddenly becoming impossible to escape your past."

Your children and grandchildren not yet born will be able to reconstruct a record of your digital life -- not just the good stuff but also the best-forgotten postings to alt.sex.fish or rec.nude. The Web shrine you once erected to an old flame, with its hyperventilating vows of eternal devotion, may give pause to a new lover in your life. The union solidarity page you put up at your first job -- years before you were bucking for senior management -- may come back to haunt your efforts to get a promotion. And who would have predicted that your Senate candidacy would go down in flames when your political opponent uncovered the image-rich homage to



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BROWSE THE

porn star Ashlyn Gere you posted in college?

Most people don't have posterity in mind when they fire off notes or post Web pages. Observes Schneier: "When you're in college and posting things online, you're young and immortal and you don't think about the impact your words will have five minutes from now, much less five, 10 or 20 years down the road."

We can already see the outlines of this new world. When you apply for a job in the high-tech sector, there's a fair chance your prospective employer will use a search engine to scout out your online postings, from late-night musings to intemperate rants fired off to a political news group. Would an employer's decision be colored by information that has nothing to do with a candidate's job qualifications, such as your out-of-the-mainstream religious beliefs, sexual orientation, HIV status or personal habits? Absolutely, and without apology. After all, "character" counts, too.

Federal law makes it a crime for government agencies to compare most digital information about U.S. citizens, points out Fred Cate, a law professor at Indiana University and author of "Privacy in the Information Age." But nothing prevents private companies or individuals from doing so. Criminal convictions, driving records, property records and voter registration records might be available with a few keystrokes.

Should employers, neighbors and descendants not yet born be able to poke around in the digital attic for information about you?

Cate believes there are good reasons for us not to be overly concerned. "It's the democratizing of Big Brother, and that's not such a bad thing," he says. "You can find out as much about your boss as he can about you. I'm not really happy that someone down the hall can follow me and make a database about me, but that's the way it is in

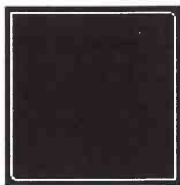




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## "Nerds 2.0.1": PBS's all-too-brief history of the Internet



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a database about me, but that's the way it is in the digital age. If your feelings get bruised, tough. If the information's true and not distorted, then you're stuck with the things you said online years ago. I don't see this as a privacy issue."

Perhaps not in the narrowest sense. But if every online expression becomes fodder for somebody's professional, personal or political agenda, clearly we lose certain freedoms of expression in the bargain. Do you really want to live next door to Big Brother, even a more democratic one?

Says Sobel: "If you define privacy as the right of individuals to control information about themselves, as we do, then mega-archiving systems clearly raise significant privacy issues. These systems convert every passing thought and contemporaneous musing into a permanent, retrievable record -- without, in many cases, the knowledge or consent of the creator."

Even Brewster Kahle, who founded the nonprofit Internet Archive and its commercial offshoot, [Alexa Internet](#), says, "There are some tricky issues here. A lot of this material is public, but is it really meant to endure?"

What Kahle is doing is nothing less than astonishing. Alexa's 36 employees, working in a century-old building in San Francisco's Presidio, send out "spiders" to crawl the Web and Usenet and store the text, video and audio on a digital jukebox tape drive. It takes about two months to capture all 300 million-plus publicly accessible Web pages. So far they've scooped up 12 terabytes of content, or 12 trillion bytes.

Kahle says he launched his project because "we need to preserve our digital heritage. Unless we start saving it, every passing day we're losing the record of one of the great turning points in human history." His Internet Archive and Alexa



have drawn widespread praise from academics, historians and Net luminaries concerned that the Web's pioneer days may soon become irretrievably lost. For researchers and scholars, it's a field day. For the rest of us, it's a mixed blessing.

Sobel cites a letter he just received from a stockbroker who was distraught about a new database, compiled by the National Association of Security Dealers, profiling the backgrounds of stockbrokers nationwide. "He had a felony conviction 23 years ago, when he was in his 20s. And now that information is about to become searchable online for the first time. He thinks this is outrageous, and I tend to agree with him."

Individuals can't even prevent private indiscretions from winding up as part of the Internet's global voyeurism machine. "I just got a phone call from a distraught mother whose 16-year-old daughter's ex-boyfriend posted nude photos of her on the Web," Sobel says. "The photos were consensual when they were taken. So suddenly it's part of the public domain, and even if the mother persuades him to take them down, he may no longer have control over how long this stuff is out there. This teenage girl may have to live with that for the rest of her life."

Kahle offers another example: "The president's personal home page is probably in our archives now -- the person who'll become president in 20 or 30 years. You know that he or she is the kind of person who already has a Web page up in college."

Are we condemned, then, to a future where journalists will pore over every online college-age musing of a prospective president?

Sobel says, "We need a public debate to redefine the concepts of what should be private and public. Should anyone be able to type your name



into a search engine and come up with public records about your private life? What good are laws that expunge a crime from your record if the old records remain accessible to anyone on the Net? What about information that's misleading, inaccurate or that you had no idea was out there in cyberspace?"

Kahle is well aware of the debate, and he's working with legal experts, historians and privacy advocates to determine the best way to make archived material available. "I used to be very oriented toward privacy, trying to keep track of who knows what about me," he said. "I've become less fanatical about it, because I find that it's more valuable to be found than for me to be obscure. For those who don't want to be found, we should let them be."

But do we have that option anymore? As the Net becomes ubiquitous, its underlying essence of interconnectedness and community comes with a price: the loss of anonymity. We are being drawn forcibly, inexorably, into the global town square.

That is no reason to avoid the Internet (as if we could!). The Net is a gift, connecting us with like-minded individuals around the world, letting us interact in soul-stirring ways. But we need to be aware that our digital footprints are permanent ones: The Net has forgotten how to forget.

This can be both blessing and curse. For many of us, it would be marvelous for our grandchildren to summon up our very first home page. For others, whose online forays may not be the stuff of posterity, a gentle forgetfulness would be far kinder.

Once, words were spoken and vanished like vapor in the air; newsprint faded and turned to dust. Today, our pasts are becoming etched like



a tattoo into our digital skins.

SALON | Nov. 25, 1998

J.D. Lasica is a new media columnist for the American Journalism Review and the Industry Standard.

## MOBILITY MATTERS.

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# Alexa Browser Companion Makes Searches More Certain

by Lisa Moskowitz, PC World

July 13, 1997

If browsers only knew your train of thought when you scanned a site, life would be grand. No more clicking back and forth between search engines and sites, hoping that one of your 13,369 search results will offer up a sliver of useful information. Sigh no more, dear Netizens. Alexa has arrived.

Announced July 17, Alexa Internet is a free Web navigation service that learns from users' collective surfing patterns. Working independently of--but in conjunction with--your browser, Alexa provides recommendations on where to go next based on a site's content and the subsequent paths taken by previous visitors to the site.

For example, when you go to a site about camping, the Alexa toolbar lets the system know where you are so it can retrieve data about that site. In seconds, you'll receive facts about the site, like how many pages it has and to whom it's registered. You'll also be able to consult a list of related sites on subjects such as the best camping grounds in California or where to buy a tent. These suggestions pop up in a Where To Go section and are based on Alexa's user tracking. Subject-sensitive advertising, Alexa's revenue source, is also displayed in this section.

As you surf, your search path is sent anonymously to Alexa and incorporated into their database. The next user who comes to that site can then benefit from your search decisions. Privacy is not compromised because a rigid system discards the user's identity before any path details are forwarded, according to Alexa co-founder Bruce Gilliat.

If the browser can't locate a site for whatever reason, Alexa will pull up the most recent rendition of it from its archive. Alexa also has an instant chat feature for real-time communication with other Alexa users.

Alexa is the brainchild of Gilliat and Brewster Kahle, the meta-data king of Wide Area Information Server (WAIS) fame. Kahle invented the information retrieval system, which fetches documents by keywords and ranks them based on the number of times the keywords appears. Sound familiar? It should. Kahle sold WAIS to America Online in 1995. He and Gilliat, who worked at WAIS, then started on their new project: archiving the Web. "We thought we should preserve our digital heritage," Gilliat said. "The question then was, what can we do with this information to provide a service for Net users?"

The answer was Alexa. The start-up was founded in 1996 and accesses an archive containing more than 5TB (about 5000 gigabytes) of Web data. Alexa requires less than 10 percent of a user's bandwidth to operate, Gilliat said.

The beta version of Alexa is currently available for download on the Alexa home page for the first 10,000 registered users. The program works with Netscape and Microsoft browsers and requires Windows 95 or NT.

IE 4: It's Here and It's Hot

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